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SUPPLEMENT 1

30th Sir Peter Freyer Memorial Lecture & Surgical Symposium

IT & Orbsen Buildings, NUI Galway
2nd and 3rd September 2005



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Friday, 2nd September 2005

	IT125G THEATRE	IT125 THEATRE	IT250 THEATRE
9.00 a.m.	Session 1: Colorectal Papers No. 1-10 Chair: Mr T Ryan & Mr R Waldron	Session 2: Breast / Endocrine Papers No. 11-20 Chair: Mr K Barry & Mr T O'Hanrahan	Session 3: Orthopaedic Trauma Papers No. 21-30 Chair: Mr M O'Sullivan & Mr A Devitt
10.40 a.m.	Coffee and Poster Viewing		
11.00 a.m.	Session 4: Vascular Papers No. 31-40 Chair: Mr S Sultan & Mr M Feeley	Session 5: GI Papers No. 41-50 Chair: Mr O McAnena & Mr D Hehir	Session 6: General Orthopaedic Papers No. 51-60 Chair: Mr J McCabe & Mr W Curtin
12.40 p.m.	Lunch and Poster Viewing		
1.30 p.m.	Session 7: Video 'How I do it' Chair: Mr D Courtney	Session 8: General Papers No. 61-68 Chair: Mr G Watson & Mr P Gillen	Session 9: Urology Papers No. 69-76 Chair: Mr E Rogers & Mr K Moran
2.50 p.m.	Coffee and Poster Viewing		
3.00 p.m.	THE IT250 THEATRE Session 10: Plenary Session Papers No. 077-088 Chairs: Professor D Bouchier-Hayes & Professor R O'Connell		
5.00 p.m.	THE IT250 THEATRE Sir Peter Freyer Memorial Lecture Dr Richard Reznick presents 'Surgical training in 35 hours per week: laudable or lunacy?'		
7.30 p.m.	ARDILAUN HOUSE HOTEL, TAYLOR'S HILL, GALWAY Social Programme Sir Peter Freyer Annual Banquet		

Saturday, 3rd September 2005

	IT125G THEATRE	IT125 THEATRE	IT250 THEATRE
10.00 a.m.	Coffee and Poster Viewing		
10.30 a.m.	Session 11: Plastics/Minimally Invasive Papers No. 89-095 Chair: Mr P Regan & Mr M Regan	Session 12: Oncology Papers No. 96-102 Chair: Prof P Redmond & Dr P Donnellan	Session 13: Breast Research Papers No. 103-109 Chair: Mr M Stokes & Mr A Hill
11.40 a.m.	Coffee and Poster Viewing		
12 noon	THE IT250 THEATRE State of the Art Lecture Professor Oscar Traynor presents 'Surgical education for the future: the Irish perspective'		

The Sir Peter Freyer Meeting qualifies for 10 CPD credits

Friday, 2nd September 2005

The IT125G Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Mr T Ryan & Mr R Waldron

Session 1: Colorectal Session (9.00 – 10.40)

- 9.00 1. Sulphomucin Expression correlates Inversely with Inflammation in the Mucous Gel Layer of the Ileal Pouch**
N Bambury, JC Coffey, FM Smith, P Hallihan, WO Kirwan
Dept. of General Surgery, Cork University Hospital, Cork
- 9.10 2. Routine Splenic Flexure Mobilization is Unnecessary in Anterior Resection**
D Brennan¹, M Moynagh¹, AE Brannigan¹, F Gleeson², M Rowland³, PR O'Connell¹
Depts. of Surgery¹ and Gastroenterology² Mater Misericordiae University Hospital, Dept of Paediatrics and Conway Institute³, University College Dublin
- 9.20 3. Thrombomodulin-Expression and its Clinical Significance in Colorectal Carcinoma**
AM Hanly¹, S Brophy¹, M Redmond², DC Winter¹, EW Kay², DJ Bouchier-Hayes¹
Dept. of Surgery¹ and Dept. of Histopathology², Beaumont Hospital, Dublin
- 9.30 4. Prospective Study on the Management of Patients with Complicated Diverticular Disease**
TA Salem, RG Molloy, PJ O'Dwyer
University Dept. of Surgery, Western Infirmary, Glasgow, UK
- 9.40 5. Symptomatic Left Colonic Diverticular Disease in Younger Patients**
SA Hyder, BD George
Dept. of Colorectal Surgery, John Radcliffe Hospital, Oxford, UK
- 9.50 6. Raman Spectroscopy A New Tool for the Early Diagnosis of Colorectal Cancer**
S Ather, G Shetty, C Kendall, T Cook, R Glass, H Barr
Royal Gwent Hospital, Newport, Gloucestershire Royal Hospital & Cranefield University, Gloucestershire UK
- 10.00 7. A Randomized, Prospective, Double Blind Comparison of Midazolam and Pethidine vs Propofol and Alfentanil for Conscious Sedation in Outpatient Colonoscopy**
M Byrne¹, E Condon¹, M Slazenger², J Duignan¹
1. Dept. of Surgery, 2. Dept. of Anesthesia, St Michaels Hospital, Dun Laoire, Dublin.

- 10.10 8. Influence of Patients Age in Treatment with Adjuvant Chemotherapy following Colorectal Cancer Surgery**
D O'Mahony, D Beddy, K Bates, Z Martin, C Canning, K Oaikhinan, JB O'Mahony, K Mealy
Dept. of Surgery, Wexford General Hospital, Wexford
- 10.20 9. Malone Anterior Continence Enema Procedure in Adults: Outcome in an Irish Setting**
S Brophy, D McNamara, J Deasy
Dept. of Colorectal Surgery, Beaumont Hospital, Dublin 9
- 10.30 10. Mode of Presentation of Colorectal Cancer – Do Elderly Patients still Present with Advanced Disease in 2005?**
M Quirke, A Lowery, W Khan, K Barry, R Waldron
Dept. of Surgery, Mayo General Hospital, Castlebar, Co Mayo
- 10.40 COFFEE**

Friday, 2nd September 2005

The IT125 Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Mr K Barry & Mr T O'Hanrahan

Session 2: Breast/Endocrine Session (9.00 – 10.40)

- 9.00 11. An Audit of the Management of Breast Cancer within a Ten Year Period in a University College Hospital**
S Persad, A Manning, R Salman, T Moloney, N O'Brien, R McLaughlin, M Kerin
Dept. of Surgery, University College Hospital Galway
- 9.10 12. The Addition of ROLL to Fine Wire Localisation of Impalpable Breast Lesions improves Clearance and Overall Cosmesis**
M Masood, JC Coffey, A Hanly, A O'Connor, D Walsh, CA Daly, D Evoy, T Castineira, I Wilson, RGK Watson
Symptomatic Breast Care Service, HSE, South Eastern Division
- 9.20 13. An Assessment of Adequate Margin Status in Breast Conservation Surgery**
MF Dillon^{1,4}, ADK Hill^{1,3,4}, CM Quinn^{2,3}, EW McDermott^{1,3}, N O'Higgins^{1,3}
1. Dept. of Surgery, 2. Dept. of Pathology, St Vincent's University Hospital, Dublin; 3. Breastcheck, Merrion unit, National Breast Screening Programme, 4. Conway Institute of Bio molecular & Bio medical Research N

- 9.30 14. Clinicopathological Factors in Surgical Strategy for Cystosarcoma Phyllodes**
BJ O'Daly, PF Ridgway, K J Sweeney, T Crotty, D Evoy, EW McDermott, ADK Hill, NJ O'Higgins
 1. Depts. of Surgery & Pathology, St Vincent's University Hospital, Elm Park, D4
- 9.40 15. Analysis of False Negative Mammography in Patients with Symptomatic Breast Disease**
IG Murphy¹, MF Dillon¹, A O'Doherty², EW McDermott¹, N O'Higgins¹ ADK Hill¹
 1. Dept. of Surgery and, 2. Radiology, St Vincent's University Hospital, Dublin 4
- 9.50 16. Clinically Detected Breast Cancer in Women of Screening Age-Group – Urgent Need for National Breast Cancer Screening**
AT Manning, R Salman, T Moloney, C Donnelly, N O'Brien, R McLaughlin, MJ Kerin
 Dept. of Surgery, University College Hospital, Galway
- 10.00 17. Breast Cancer in the South East; An Audit prior to the Introduction of Screening**
TB O'Neill, P Fitzpatrick, C Castinero, I Wilson, D Evoy, G Watson
 Dept. of Surgery, Waterford Regional Hospital, Ardkeen, Waterford
- 10.10 18. Predictors of Invasive Disease in Breast Cancer when Core Biopsy Demonstrates DCIS Only**
MF Dillon^{1,4}, ADK Hill^{1,4}, CM Quinn^{3,5}, A O'Doherty^{2,5}, EW McDermott¹, N O'Higgins¹
 1. Dept. of Surgery, 2. Dept. of Pathology, 3. Dept. of Radiology, 4. Conway Institute of Biomolecular and Biomedical Research, University College Dublin, 5. Breastcheck, Merrion Unit, Dublin
- 10.20 19. Sestamibi Scan Directed Minimally Invasive Video Assisted Parathyroidectomy: An Effective Treatment for Solitary Parathyroid Adenoma**
AD Murphy, DS Quill
 Dept. of Surgery, University College Hospital, Galway
- 10.30 20. A Combination of Minimally Invasive Radioguided Parathyroidectomy and Intra-Operative PTH Assay Accurately Predicts Resection of Parathyroid Adenomas**
G Murphy, E Myers, M O'Donovan, HP Redmond
 Dept. of Surgery, Cork University Hospital, Ireland
- 10.40 COFFEE**

Friday, 2nd September 2005

The IT250 Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Mr M O'Sullivan & Mr A Devitt

Session 3: Orthopaedic Trauma Session (9.00 – 10.40)

- 9.00 21. Fractured Neck of Femur in Cork City and County 1994-2003 – Changes in Demographics and Lifetime Hip Fracture Risk**
I Brennan, B Whelan, E Falvey, F Shanahan, Molloy MG, AJ McGuinness
 1. Dept of Trauma and Orthopaedic Surgery, 2. Dept of Rheumatology and Sports Medicine, Cork University Hospital
- 9.10 22. 10 Year Comparative Audit of Patient Transportation Times to a Regional Orthopaedic Unit**
D Fitzgerald, K Mulhall, B Lenehan, M O'Sullivan
 Dept. of Orthopaedics, Merlin Park Regional Hospital, Galway
- 9.20 23. Ankle Fractures in the Geriatric Population: Operative or Non-operative Treatment**
M Vioreanu, S Brophy, S Kearns, E Kelly, B Hurson, SK O'Rourke, W Quinlan
 St Vincent University Hospital Elm Park Dublin
- 9.30 24. Spinal Injuries in Irish Rugby - a 10 Year Review**
MJ Shelly, M Timlin, JS Butler, M Walsh, AR Poynton, JM O'Byrne
 National Spinal Injuries Unit and Dept. of Orthopaedic Surgery, Mater Misericordiae University Hospital, Eccle St., Dublin 7
- 9.40 25. Mean Streets –Patterns of Firearm Injury Presenting to an Irish Acute General Hospital**
R Mac Niocaill, C Hollinsworth, P Keeling, J Mckeever, S O'Flanagan, P Keogh, P Kenny
 Dept. of Trauma and Orthopaedic Surgery, Dept. of Surgery, Dept. of Plastic and Reconstructive Surgery and Dept. of Emergency Medicine, Connolly Hospital, Blanchardstown, Dublin 15
- 9.50 26. Osteoporosis Management in Ireland – Who Does and Who Should?**
NT O'Malley, S Morris, JP McElwain
 Dept of Orthopaedics, AMNCH, Tallaght, Dublin 24
- 10.00 27. Work Related Injury Presenting to a Regional Orthopaedic Service**
J Garvin, T McCarthy, A Devitt, M O'Sullivan
 Dept. of Orthopaedics, Merlin Park Regional Hospital, Galway

- 10.10 **28. Glutamine Preconditioning Protects against Tourniquet-Induced Local and Distant Organ Injury**
 CG Murphy, G Chen, DC Winter, DJ Bouchier-Hayes
 Dept. of Surgery, RCSI Research & Education Centre, Beaumont Hospital, D9
- 10.20 **29. Thromboembolism Prevention Practices in an Irish Orthopaedic Population**
 D Cawley, J Street, B Lenehan, W Curtin, A Devitt
 Dept. of Orthopaedics, Merlin Park Hospital, Galway
- 10.30 **30. The Relationship of the Sciatic Nerve to the Tendons Used for ACL Reconstruction in the Posterior Thigh: An Anatomical Study.**
 C Egan, A O'Regan¹, J Last¹, Zubovic A², Moran R²
 1. UCD Anatomy Laboratory; 2. Cappagh National Orthopaedic Hospital, Dublin
- 10.40 **COFFEE**

Friday, 2nd September 2005

The IT125G Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Chair: Mr S Sultan & Mr M Feeley

Session 4: Vascular Session (11.00 – 12.40)

- 11.00 **31. Mesenteric Traction during Open Abdominal Aortic Aneurysm Repair may lead to Intestinal Ischaemia**
 N Arya, LL Lau, B Lee, RJ Hannon, IS Young, CV Soong
 Dept. of Vascular and Endovascular Surgery, Belfast City Hospital, Belfast, Northern Ireland, UK
- 11.10 **32. Infrainguinal Arterial Reconstruction – Does Gender influence Outcome?**
 P Hallihan, E Myers, CJ Shields, D Long, HP Redmond, GJ Fulton
 Dept. of Surgery, Cork University Hospital, Cork
- 11.20 **33. A Prospective Observational Longitudinal Study of Pharmacological Manipulation in Abdominal Aortic Aneurysm (AAA) Surgery: Are Statins, Beta-blockers and Anti-platelet Therapy the Best Combination?**
 EJ Andrews, K Oaikhinan, B Mahendran, N Hynes, A Jawad, S Tawfik, A Ishtiaq, D Courtney, S Sultan
 Western Vascular Institute, Dept. of Vascular & Endovascular Surgery, University College Hospital, Galway

- 11.30 **34. An Observational Parallel Group Comparison Study of Duplex Ultrasound Arterial Mapping (DUAM) with Magnetic Resonance Angiography (MRA) and Conventional Angiography (CA) as Sole Pre-Operative Investigative Tools for Endovascular Revascularizations**
 A Lowery, B Mahendran, BJ Manning, N Hynes, A Jawad, A Ishtiaq, D Courtney, S Sultan.
 Dept. of Vascular and Endovascular Surgery, Western Vascular Institute, University College Hospital Galway
- 11.40 **35. Haemoglobin A1C (HBA1C) in Nondiabetic Vascular Patients. Is HBA1C an Independent Risk Factor and Predictor of Adverse Outcome?**
 CJ O'Sullivan, EJ Andrews, N Hynes, M Mahendran, A Ishtiaq, A Jawad, D Courtney, S Sultan
 Western Vascular Institute, Dept. of Vascular and Endovascular Surgery, University College Hospital Galway, Galway
- 11.50 **36. Demographic Changes in the Level and Numbers of Amputees since the Introduction of Subintimal Angioplasty (SIA). Influence of Deliberate Practice on Limb Salvage Rates and Long-term in Critical Lower Limb Ischaemia (CLI): A 15-years Experience**
 N Hynes, BJ Manning, S Walsh, B Mahendran, E Andrews, A Jawad, A Ishtiaq, D Courtney, S Sultan
 Western Vascular Institute, Dept. of Vascular and Endovascular Surgery, University College Hospital, Galway
- 12.00 **37. Efficacy of Cerebral Protection during Carotid Artery Stenting: Objective Evidence from Diffusion-Weighted MRI**
 CO McDonnell¹, SJ Fearn¹, SR Baker¹, D Price², MA Goodman¹, MMD Lawrence-Brown¹
 1. Depts. of Vascular Surgery¹ and, 2. Radiology, Mount Medical Centre, Perth, Western Australia.
- 12.10 **38. A Prospective Observational Study of Carotid Artery Stenting (CAST) under Neuro-Protection and Carotid Endarterectomy (CEA) in High-Risk Patients. Short Term Results**
 N Hynes, B Mahendran, E Andrews, A Ishtiaq, A Jawad, S Tawfik, D Courtney, G O'Sullivan, S Sultan
 Western Vascular Institute, Dept. of Vascular & Endovascular Surgery, N University College Hospital Galway
- 12.20 **39. Non-Operative Management of Critical Limb Ischemia (CLI): Initial Short Term Experience with a Biomechanical Device**
 B Mahendran, S Tawfik, N Hynes, A Fahy, A Jawad, A Ishtiaq, EJ Andrews, D Courtney, S Sultan
 Western Vascular Institute, University College Hospital Galway
- 12.30 **40. Factors Predicting Mortality in 178 Consecutive Patients undergoing Surgery for Ruptured Abdominal Aortic Aneurysm**
 MA Sharif, N Arya, LL Lau, RJ Hannon, B Lee, AA Barros D'Sa, JM Hood, PH Blair, CV Soong, AG McKinley
 1. Dept. of Vascular and Endovascular Surgery, Belfast City Hospital
 2. Vascular Surgery Unit, Royal Victoria Hospital, Belfast
- 12.40 **LUNCH**

Friday, 2nd September 2005

The IT125 Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Mr O McAnena & Mr D Hehir

Session 5: Gastrointestinal Session (11.00 – 12.40)

- 11.00 41. Surgery Remains the Primary Treatment of Choice for Gastrointestinal Stromal Tumours**
CB Peirce, M Doyle, M Aremu, NC Swan, KC Conlon
 Dept. of Surgery and Pathology, The Adelaide and Meath Hospital incorporating the National Children's Hospital, Tallaght, Dublin 24
- 11.10 42. The Application of Proton Pump Inhibitors in Long Term Use**
D Cawley, M Harrison, A Hazlina, G O'Mara
 Dept Of Medicine, Roscommon General Hospital
- 11.20 43. The Impact of MRSA Infection Post-Whipple's Pancreatectomy: A 10-Year Experience**
JS Butler, JP Burke, R Ruddy, MM Hannan, GP McEntee
 Dept. of Hepatobiliary Surgery and Dept. of Microbiology, Mater Misericordiae University Hospital, Eccles Street, Dublin 7
- 11.30 44. Cholangiocarcinoma - A 10 Year Experience in a Specialist Hepatobiliary Unit**
T Gallagher, R Kenneally, E Hoti, M Zaman, J Geoghegan
 Hepatobiliary unit, St. Vincent's University Hospital, Elm Park, Dublin 4
- 11.40 45. Reliability of Symptom Questionnaires in Patients with Gastro-Oesophageal and Laryngopharyngeal Reflux**
M Geraghty, P Lawlor, N Ravi, PWN Keeling, PJ Byrne, JV Reynolds
 Gasto-intestinal Function Unit, St James's Hospital, Dublin
- 11.50 46. An Update on Comparable Roles of Ultrasonography and Magnetic Resonance in the Biliary Tract**
HJ Khan, M Tower, FO Cunningham, JP McGrath
 Dept. of Gastro-intestinal Surgery and Radiology, Our Lady's Hospital, Navan, Co. Meath

- 12.00 47. A Prospective Randomised Trial Evaluating an Anti-Reflux Stent in the Palliative Treatment of Carcinoma of the Lower Third of the Oesophagus**
C Power, K Lim, P Byrne, J Moore, T Fitzgerald, NPW Keeling, JV Reynolds
 Depts. of Surgery and Gastrointestinal Physiology, Trinity Centre for Health Sciences, St. James's Hospital, Trinity College Dublin, Dublin 8
- 12.10 48. Laparoscopic Nissen Fundoplication – The Learning Curve: A DGH Experience**
S Raman, B Piramanayagam, KM Thippeswamy, AP Corfield
 The County Hospital, Hereford, United Kingdom
- 12.20 49. A Technique for Surgical Closure of the Complex Abdomen**
G Roche-Nagle, M O'Sullivan, G McGreal, RG O' Sullivan
 Dept. of Surgery, Mercy University Hospital, Cork
- 12.30 50. Raised Faecal Calprotectin Levels in Patients with Right Iliac Fossa Pain A Non-Invasive Predictor of Acute Appendicitis**
C Power, H Al-Suwaidi, KM Muhammad, M Floyd, C Barry-Kinsella, P Keeling, TN Walsh
 Dept. of Surgery, Dept. of Gynaecology, The Royal College of Surgeons in Ireland, James Connolly Memorial Hospital, Blanchardstown, Dublin 15
- 12.40 LUNCH**

Friday, 2nd September 2005

The IT250 Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Mr J McCabe & Mr W Curtin

Session 6: General Orthopaedic Session (11.00 – 12.40)

- 11.00 51. A Prospective, Randomised, Controlled Trial Comparing Subacromial Bursa Block with Intrascalene Block in Patients undergoing Arthroscopic Subacromial Decompression**
A Nisar, MWJ Morris, J Freeman, J Cort, P Rayner, SA Shahane
 Chesterfield and North Derbyshire Royal Hospital NHS Trust, Chesterfield, Derbyshire, United Kingdom

- 11.10 52. Experimental Investigation of Negative Pressure Intrusion Techniques of Acetabular Component Cementation in Total Hip Arthroplasty**
R Mac Niocaill, J Britton, P Kenny, P Prendergast
 Dept. of Orthopaedic Surgery, Cappagh National Orthopaedic Hospital, Finglas, Dublin 11 and Trinity Centre for Bioengineering, Dept. of Mechanical Engineering, Trinity College, Dublin
- 11.20 53. Risk Factors for Predicting Urinary Catheterisation in the First 24 Hours Post Lower Limb Arthroplasty. A Prospective Study**
G Weekes, GC O'Toole, JF Quinlan, JM O'Byrne
 Cappagh National Orthopaedic Hospital, Finglas, Dublin 11
- 11.30 54. Quantitative Assessment of Helmet Visor Contamination in Total Hip Arthroplasty**
K Hirpara, T McCarthy, A Devitt, W Curtin, M O'Sullivan
 Dept. of Orthopaedics Merlin Park Hospital Galway
- 11.40 55. Contamination in Cemented Arthroplasty – A 4 Year Follow Up of Deep Wound Contamination**
AM Byrne, SF Morris, P Gargan, T Mc Carthy, J O'Byrne, W Quinlan
 Dept. of Orthopaedic Surgery and Dept. of Medical Microbiology, Cappagh National Orthopaedic Hospital, Finglas, Dublin 15
- 11.50 56. Variation in Position of the L4/5 Disc Inter-Space from Tuffier's Line- Review of 450 Radiographs**
J Walsh, JF Quinlan, K Butt, M Towers, A Devitt
 Cappagh National Orthopaedic Hospital, Finglas, Dublin 11
- 12.00 57. Evaluating the Quality of 'Quality of Life' Studies in Spinal Journals**
S Persad, J Street, B Lenehan, J McCabe
 Dept. of Orthopaedics, Merlin Park Regional Hospital Galway
- 12.10 58. Significant Psychological and Functional Improvement following Surgical Treatment of Lumbar Spondylosis**
SA Malik, S Kutty, S Morris, FE Dowling, E Fogarty, D Moore
 Dept. of Orthopaedic Surgery, Adelaide & Meath Hospital, Tallaght, Dublin 24
- 12.20 59. The Weight of a Patients' Hospital Chart as a Predictive Factor of Post Operative Morbidity following Lumbar Spinal Decompression**
S Persad, J Street, B Lenehan, J McCabe
 Dept. of Orthopaedics, Merlin Park Regional Hospital, Galway
- 12.30 60. 3-D Motion Analysis of Lumbar Spine Motion in Athletes during Weight Lifting, using the Zebris System.**
J. Walsh¹, JF Quinlan¹, D. Fitzpatrick², D. McCormack¹
 1. Cappagh National Orthopaedic Hospital, Finglas, Dublin 11;
 2. Dept. of Engineering, University College Dublin, Belfield, Dublin 4
- 12.40 LUNCH**

Friday, 2nd September 2005

The IT125G Theatre, IT Building, NUI Galway

Time Allowed

10 minutes presentation; 5 minutes discussion

Chairperson

Mr D Courtney

Session 7: Video Session on 'How I do It' (1.30 – 2.50)

- 1.30 Laparoscopic Left Colectomy with Intracorporeal Anastomosis**
I Khan, DS O'Riordan
 AMNCH, Tallaght, Dublin
- 1.45 Laparoscopic Sigmoid Loop Colostomy**
F Cooke, M Regan
 Dept. of Surgery, University College Hospital Galway
- 2.00 Life of a Trainee Vascular Surgeon**
E Ryan, P King, J Diener, S Sultan
 Dept. of Vascular Surgery, University College Hospital Galway
- 2.15 The Ins and Outs of Plad**
BJ O'Daly, N O'Malley, S Dudeney
 Dept. of Orthopaedic Surgery St. Vincent's University Hospital, Elm Park, Dublin 4
- 2.30 'ROLL' – and the Excision of Occult Breast Lesions**
C Coffey, RWG Watson
 Symptomatic Breast Unit, South Eastern Division of HSE, Waterford General Hospital
- 2.50 COFFEE**

Friday, 2nd September 2005

The IT125 Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Mr G Watson & Mr P Gillen

Session 8: General Session (1.30 – 2.50)

- 1.30 61. Operative Workload: a Surgical Trainee's Experience**
A Lowery, M Quirke, F Cafferty, W Khan, PW Eustace, R Waldron
 Dept. of Surgery, Mayo General Hospital, Castlebar, Co. Mayo
- 1.40 62. Discharge Letters — Pay Attention to the Small Print!**
HM Askar, FJ Fleming, M Tan, MA Stokes, F Lennon, P Gillen
 Dept. of Surgery, Our Lady of Lourdes Hospital, Drogheda
- 1.50 63. Precictors of Acute Renal Failure in Patients with Normal Pre-Operative Renal Function**
KK Doddakula, H Parissis, F Henry, M Shuhaibar, M Tolan, V Young, E McGovern
 St. James's Hospital, Dublin 8
- 2.00 64. HMGB1 Targeted Immunotherapy provides Unique Protection against the Local and Systemic Effects of Acute Pancreatitis**
A O'Callaghan, T Murphy, JH Wang, HP Redmond
 Dept. of Surgery, University College Cork
- 2.10 65. Vascular Audit using the Possum Scoring Tool: Implementation in a Teaching Hospital**
JS Byrne, ET Condon, M Ahmed, D Mehigan, S Sheehan, M Barry
 Dept. of Vascular Surgery, St. Vincent's University Hospital, Elm Park, D 4
- 2.20 66. Back to the Future - A Wireless, Real-Time Patient Information System at the Bedside**
P Balfe, M Aremu, K Conlon
 Professorial Surgical Unit, Dept. of Surgery, Adelaide and Meath Hospitals incorporating the National Childrens Hospital, Tallaght D24
- 2.30 67. European Working Time Directive (EWTD) – Are We Getting Better? The Trainers Perspective**
B Piramanayagam, S Raman, PR Shah, A Luhmann, EV Williams, AP Corder
 The County Hospital, Hereford, United Kingdom
- 2.40 68. Handing over of Surgical Patients**
A Kumar, AM Bhargava
 Dept. of Surgery, King George Hospital, Ilford, London
- 2.50 COFFEE**

Friday, 2nd September 2005

The IT250 Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Mr E Rogers & Mr K Moran

Session 9: Urology Session (1.30 – 2.50)

- 1.30 69. Hypoxia Induced Proteins, a Potential Mechanism for Preconditioning in Solid Organ Transplantation**
P Daly, A DA Healy, RE Power, NG Docherty, CT Taylor, JM Fitzpatrick, R William, G Watson
 1. Dept. of Surgery, Medicine and Therapeutics, Mater Misericordiae Hospital, Dublin; 2. Conway Institute2UCD, Dublin 4
- 1.40 70. Transrectal Prostate Biopsy - Does a Role Exist for Neurovascular Bundle Local Anaesthesia?**
DG Lohan, N Gough, CP Meehan, CG Cronin, S Walsh, CJ Roche, PA McCarthy
 Dept of Radiology, University College Hospital, Galway
- 1.50 71. Day Case Prostate Vaporization using High-Powered KTP Laser**
C Brady, A Thwaini, G Vrakas, J Cook, R Thilagarajah
 Dept. of Urology, Broomfield Hospital, Mid Essex Hospitals NHS Trust, Chelmsford, UK
- 2.00 72. Can a Decreasing PSA be used to Avoid Prostate Biopsy?**
D Connolly¹, T Nambirajan¹, LJ Murray², A Gavin¹, PF Keane¹
 1. Dept. of Urology, Belfast City Hospital,
 2. Northern Ireland Cancer Registry (NICR), Queen's University Belfast
- 2.10 73. The Consent Concept**
PJ Sullivan, SS Connolly, D Fitzgerald, I Cheema, S Jaffrey, H Bredin, M Corcoran
 Dept. of Urology, University College Hospital Galway
- 2.20 74. Apoptosis, Proliferation and Transdifferentiation in HK-2 Cells during Protein Overload and Hypoxia: Effect of Angiotensin II Treatment**
OEMG O'Sullivan, NG Docherty, JM Fitzpatrick, RWG Watson
 Dept. of Surgery, Mater Misericordiae University Hospital, Dublin Molecular Medicine Centre, Conway Institute of Biomolecular and Biomedical Research, University College Dublin.
- 2.30 75. Presentation, Diagnosis and Management of Prostate Cancer in a Peripheral Hospital – A Twelve Month Analysis**
C McManus, S Diver, M Iman, Y Nagandran, E Lee Chang, K Moran
 Dept. of Surgery, Letterkenny General Hospital, Letterkenny
- 2.40 76. The Role of Hand Held Doppler in Acute Scrotal Pain**
K Ahmad, P Hickey, SC Ng, ST Cheema, J Drumm, SA Navi
 Dept. of Surgery, Mid Western Regional Hospital, Limerick
- 2.50 COFFEE**

Friday, 2nd September 2005

The IT250 Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Prof D Bouchier-Hayes & Prof R O'Connell

Session 10: Plenary Session (3.00 – 2.50)

3.00 77. Oral Immune Tolerance to Foregut Cancers may be Surmounted By Immunogenetherapy

J Larkin, M Tangney, CG Collins, MG O'Brien, G Casey, D Soden, GC O'Sullivan. Cork Cancer Research Centre & Dept. of Surgery, Mercy University Hospital, Grenville Place, Cork

3.10 78. A Comparison of Open (OR) and Endovascular Abdominal Aortic Aneurysm Repair (EVAR) with best Medical Treatment (BMT). Has the Availability of EVAR Expanded our Indications for Intervention, and improved Survival?

N Hynes, B Mahendran, S Tawfik, J Asad, E Andrews, A Ishtiaq, D Courtney, I Davidson, S Sultan. Western Vascular Institute, Dept. of Vascular & Endovascular Surgery, University College Hospital Galway

3.20 79. Investigation of Progesterone Receptor B, (PRB), and Growth Arrest Specific Gene 6, (GAS6), in Breast Cancer

O McCormack¹, A McCann¹, Wy Chung¹, F Cooke¹, B Flynn¹, E Fox¹, E Gallagher¹, A McGoldrick¹, M Harrison², P Dervan^{1,2}, MJ Kerin^{1,3}
 1. Conway Institute of Biomolecular and Biomedical Research, U.C.D., D4
 2. Dept. of Pathology, Mater Misericordiae Hospital, D7
 3. Dept. of Surgery, University College Hospital Galway

3.30 80. Novel Titanocene Anti-Cancer Drugs and Their Effects on Apoptosis in Androgen Independent Prostate Cancer Cells

K O'Connor¹, M Tacke², FJK Rehman², JM Fitzpatrick¹, R William, G Watson¹
 1. Dept. of Surgery, Mater Misericordiae University Hospital, Conway Institute
 2. Chemistry Dept., Conway Institute, University College Dublin

3.40 81. Associations and Interactions between the Co-Regulatory Protein SRC-1 and Ets-2 in Breast Cancer

M Mc Ilroy, E Myers¹, ADK Hill¹, LS Young. Conway Institute, University College Dublin; Dept. of Surgery, St Vincent's University Hospital, Dublin

3.50 82. Initial PSA Levels and the Long Term Risk of Prostate Cancer

D Connolly¹, T Nambirajana¹, LJ Murray², A Gavin², PF Keane¹
 1. Dept. of Urology, Belfast City Hospital,
 2. Northern Ireland Cancer Registry, Queen's University Belfast

4.00 83. Taurolidine Inhibits Colorectal Adenocarcinoma Metastases in Vivo and in Vitro by Inducing Apoptosis

NWD Clarke, JH Wang, HP Redmond. Dept of Academic Surgery, University College Cork, Cork

4.10 84. Downregulation of the HHIP gene in Intraductal Papillary Mucinous Neoplasms of the Pancreas

ST Martin, SR Hustinx, N Sato, CJ Yeo, A Maitra, M Goggins. Pancreatic Cancer Early Detection Lab, Dept. of GI Pathology, The Johns Hopkins Medical Institutions, Baltimore, Maryland, USA 21205

4.20 85. Hypertonic Saline Reduces Post-Operative Peritoneal Adhesion Formation

JM Buckley, CJ Shields, DC Winter, A O'Callaghan, WO Kirwan, HP Redmond. Dept. of Surgery, Cork University Hospital, Cork

4.30 86. Combination of SELDI-TOF and Data Mining Provides Early Stage Response Prediction for Rectal Tumours undergoing Multimodal Neoadjuvant Therapy

FM Smith¹, E Fox², W Gallagher², RB Stephens¹, EF Gaffney, EF Petricoin³, L Liotta³, MJ Kennedy¹, JV Reynolds¹
 1. Dept. of Surgery and the Academic Unit of Clinical and Molecular Oncology St James's Hospital and Trinity College Dublin
 2. Dept. of Pharmacology Conway Institute of Biomolecular and Biomedical Research University College Dublin Belfield, Dublin 4
 3. FDA-NCI Clinical Proteomics Program, Laboratory of Pathology, Center for Cancer Research, National Cancer Institute, Bethesda, MD, USA

4.40 87. Thermotolerance-Induced Goblet Cell Activity Confers Protection in Post Operative Gut Barrier Dysfunction

R Ali, T Farrell. Dept. of Anatomy, The Royal College of Surgeons in Ireland

4.50 88. Preconditioning Modulation of Leucocyte and Endothelial Activation in Cardiac Surgery: The Role of an Omega-3 Fatty Acid Infusion

J McGuinness, J Byrne, A Hanly, C Condron, H Chen, JM Redmond, D Bouchier-Hayes. Dept. of Surgery, The Royal College of Surgeons in Ireland

5.00 Sir Peter Freyer Memorial Lecture

SURGICAL TRAINING IN 35 HOURS PER WEEK: LAUDABLE OR LUNACY?

Dr Richard Reznick, MD, MEd, FRCSC, FACS. RS McLaughlin Prof & Chair, Dept. of Surgery, University of Toronto

7.30 Sir Peter Freyer Banquet

BANQUET AT ARDILAUN HOUSE HOTEL, GALWAY

Saturday, 3rd September 2005

The IT125G Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Mr P Regan & Mr M Regan

Session 11: Plastics/Minimally Invasive Session (10.30 – 11.40)

- 10.30 89. A Cluster of Clostridium Difficile Associated Diarrhoea on an Orthopaedic Ward can Lead to High Morbidity and Mortality. A Retrospective Audit and Review**
D Lui, S Bahari, P Nicholson, J McElwain
Dept. of Trauma Orthopaedics, Adelaide and Meath Hospital
- 10.40 90. Upper Dorsal Endoscopic Thoracic Sympathectomy: A Comparison of One and Two Port Ablation Technique in 180 Cases**
MO Murphy, J Ghosh, N Khwaja, AT Halka, NJ Turner, D Murray, A Vohra, MG Walker
Dept. of Vascular Surgery, Manchester Royal Infirmary, Oxford Road, Manchester M13 9WL, UK
- 10.50 91. Suitability of Laparoscopic Nissen Fundoplication to the Day –Care Setting**
IZ Khan, M Al-Akash, ON Tucker, K Austin, I Mohammad, DS O’Riordan
The Dept. of Surgery, The Adelaide and Meath Hospital, Tallaght, Dublin 24; Naas General Hospital, Co.Kildare
- 11.00 92. Long Term Evaluation of Median and Ulnar Nerve Injuries**
AT Manning, EM Purcell, A Kelly, PJ Regan, JJ McCann, JL Kelly
Dept. of Plastic Reconstructive & Hand Surgery, University College Hospital Galway
- 11.10 93. Glycaemic Control plus Arginine Supplementation Attenuates the Impaired Wound Healing in a Diabetes Mellitus Experimental Model**
JB O Sullivan, RP Hanson, FC Chan, B Kneafsey, D Bouchier-Hayes
Dept. of Surgery, Education and Research Centre, The Royal College of Surgeons in Ireland
- 11.20 94. The Role of Isolated Limb Thermal Preconditioning in Flexor Tendon Healing**
C Healy¹, K Mulhall¹, E Kay², D Fitzpatrick³, D Bouchier-Hayes¹
1. Dept. Surgery and, 2. Histopathology, RCSI Education and Research Centre, Beaumont Hospital, Dublin 9. 3. Dept. Engineering, U.C.D., Belfield, Dublin 4.
- 11.30 95. Biomechanical Assessment of Skin Suture Techniques in a Porcine Model**
M O’Sullivan, EM Purcell, PJ Regan, J McCann, JL Kelly
Dept. of Plastic & Reconstructive Surgery, University College Hospital Galway
- 11.40 COFFEE**

Saturday, 3rd September 2005

The IT250 Theatre, IT Building, NUI Galway

12.00 State Of The Art Lecture

SURGICAL EDUCATION FOR THE FUTURE: THE IRISH PERSPECTIVE

Professor Oscar Traynor, MCh, FRCSI

Prof. of Postgraduate Surgical Education, Royal College of Surgeons in Ireland

Saturday, 3rd September 2005

The IT125 Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Prof P Redmond & Dr P Donnellan

Session 12: Oncology Session (10.30 - 11.40)

- 10.30 96. Imaging of the Liver after Colorectal Carcinoma Resection: A Waste of Time?**
C Canning, Z Martin, S Rajendran, D Beddy, K Bates, D O’Mahony, F Ofori-Kuma, JB O’Mahony, K Mealy
Dept. of Surgery, Wexford General Hospital, Wexford
- 10.40 97. Growth Factors Regulation of ETS-2 Protein and C-MYC in Recurrent Breast Cancer**
D Alazawi, ADK Hill, NJ O’Higgins, LS Young
Dept. of Surgery, Saint Vincent’s University Hospital and the Conway Institute, University College Dublin
- 10.50 98. Hypoxia Mediates Invasion of Breast Cancer Cells via Increased Expression of the Chemokine Receptor CXCR4**
E Faul, JH Wang, HP Redmond
Dept. of Surgery, Cork University Hospital, Cork
- 11.00 99. Parallel Gene and Protein Expression Analysis of the Immune Response to Major Surgery in Oesophageal Cancer Patients Treated with Surgery Alone or a Multimodality Regimen**
JO Murphy, N Miller, A Ryan, N Ravi, JV Reynolds
Dept. of Surgery, St James’s Hospital and Trinity College Dublin

11.10 100. Analysis of Ex-vivo Staging of Colorectal Carcinoma by Sentinel Lymph Node Mapping

*DT McDowell, ET Condon, GC O'Brien, DB McNamara, JM Deasy
Dept. of Colorectal Surgery, Beaumont Hospital, Dublin 9*

11.20 101. Immunohistochemical Detection of Lymph Node Micrometastases in Rectal Cancer Does Not Predict Recurrence

*FJ Fleming¹, AJ Hayanga¹, F Glynn¹, H Thakore², E Kay², P Gillen¹
1. Dept. of Surgery, Our Lady of Lourdes Hospital, Drogheda;
2. Dept. of Pathology, Beaumont Hospital, Dublin*

11.30 102. TH1/TH2 Imbalance in Patients with Malignant Brain Tumours

*D Kamadar^{1,2}, R Kumar^{1,2}, K Hill¹, J Greenman², D O'Brien¹
1. Dept. of Neurosurgery, Hull Royal Hospital, Hull, UK
2. Postgraduate Medical Institute, University of Hull, UK*

11.40 COFFEE

Saturday, 3rd September 2005

The IT250 Theatre, IT Building, NUI Galway

12.00 State Of The Art Lecture

SURGICAL EDUCATION FOR THE FUTURE: THE IRISH PERSPECTIVE

*Professor Oscar Traynor, MCh, FRCSI
Prof. of Postgraduate Surgical Education, Royal College of Surgeons in Ireland*

Saturday, 3rd September 2005

The IT250 Theatre, IT Building, NUI Galway

Time Allowed

7 minutes speaking; 3 minutes discussion

Chairpersons

Mr M Stokes & Mr A Hill

Session 13: Breast Research Session (10.30 - 11.40)

10.30 103. MYC Signalling in Survivin Regulation in Breast Tumour Progression

*N Cosgrave¹, A Hill², L Young¹
1. Dept. of Surgery, Conway Institute, University College Dublin;
2. St. Vincents University Hospital, Dublin 4*

10.40 104. The Psychosocial and Demographic Correlates of Post-Mastectomy Breast Reconstruction

*L McCann¹, C Curran¹, E Lee², W Lee³, JC Walsh¹, PJ Regan³, MJ Kerin²
1. Dept. of Psychology, National University of Ireland, Galway
2. Dept. of Surgery, University College Hospital, Galway
3. Dept. of Plastic Surgery, University College Hospital, Galway*

10.50 105. Tamoxifen Induced ER Activity in Endocrine Resistant Breast Cancer

*CC Davidson^{1,2}, D.Kavanagh^{1,2}, EW McDermott¹, N O'Higgins¹, ADK Hill^{1,2}, L Young^{1,2}
1. Dept. of Surgery, St.Vincents University Hospital; 2. Conway Institute of Biomolecular and Biomedical Reserch, University College Dublin*

11.00 106. Growth Factor Activation of the Mitogen-Activated Protein (MAP) Kinase Pathway increases Breast Coactivator Protein Expression and may Drive Breast Tumourigenesis

*RS Prichard, ADK Hill, EW McDermott, NJ O'Higgins, L Young
Dept. of Surgery, St Vincent's University Hospital and the Conway Institute, University College Dublin*

11.10 107. The Combined M30/BCL2 Apoptotic Index – A Novel Prognostic Index or Invasive Ductal Breast Cancer

*A O'Connor, JC Coffey, P Ryan, A Hanly, R Landers, RGK Watson
Symptomatic Breast Care Service, HSE, South Eastern Division*

11.20 108. Mammographic Screening Of A Referral Population

*S Walsh, R Salman, R Mc Laughlin, MJ Kerin
Dept. of Surgery, University College Hospital, Galway*

11.30 109. A Molecular Analysis of the Relationship between Hormone Receptor and Mammoglobin in Breast Cancer
E Hennessy, C Curran, MJ Kerin
 National Breast Cancer Research Institute, Dept. of Surgery, University College Hospital Galway

11.40 COFFEE

Saturday, 3rd September 2005

The IT250 Theatre, IT Building, NUI Galway

12.00 State Of The Art Lecture

SURGICAL EDUCATION FOR THE FUTURE: THE IRISH PERSPECTIVE

Professor Oscar Traynor, MCh, FRCSI

Prof. of Postgraduate Surgical Education, Royal College of Surgeons in Ireland

Poster Abstracts

UROLOGY

Poster 1. An Analysis of the Use of a Memokath® Prostatic Stent for Obstructive Uropathy

P Daly, K O'Connor, T Pasha, E Rogers

Mercy University Hospital, Granville Place, Cork

Poster 2. PCNL by Numbers: A 7-Year Analysis of Percutaneous Nephrolithotomy in Practice

CP Meehan, C Cronin, N Gough, PA McCarthy

Dept. of Radiology, University College Hospital, Galway

Poster 3. Is Digital Rectal Examination (DRE) Necessary in the Early Detection of Prostate Cancer?

MR Quinlan, S Teahan, D Mulvin, DM Quinlan

Dept. of Urology, St. Vincent's University Hospital, Elm Park, Dublin 4

GASTROINTESTINAL

Poster 4. Internal Hernia through the Foramen of Winslow associated with Rupture of Lesser Omentum

O Mabadeje, S Durrani, S Mahmood

Dept. of Surgery, Mid-Western Regional Hospital, Nenagh, Co. Tipperary

COLORECTAL

Poster 5. Sequential MRI Scans in Multimodality Management of Rectal Cancer Predict Nodal Pathology but are Poor Predictors of Change in T Stage

FM Smith¹, S Sookhai¹, D Tuite², E Carton¹, RB Stephens¹, M Keogan², C Muldoon³, MJ Kennedy¹, JV Reynolds¹

1. Dept. of Surgery and the Academic Unit of Clinical and Molecular

Oncology St James's Hospital and Trinity College Dublin, Ireland

2. Dept. of Radiology, St James's Hospital, Dublin

3. Dept. of Histopathology, St James's Hospital, Dublin

Poster 6. The Role of Laparoscopic Loop Stoma Formation

CLJ Beirne, F Cooke, MF Khan, M Regan

Dept. of Surgery, University College Hospital Galway

Poster 7. Impact of Urbanisation on Colorectal Cancer Presentation over a Twenty Year Period in Ireland

J Bhangu, FJ Fleming, F Lennon, MA Stokes, P Gillen

Dept. of Surgery, Our Lady of Lourdes Hospital, Drogheda, Co Louth,

Poster 8. Do we Still Need to Perform Lateral Anal Sphincterotomy for Anal Fissure?

SA Hyder, BD George

Dept. of colorectal surgery, John Radcliffe Hospital, Oxford, UK

Poster 9. Patient-Administered versus Physician Administered Scores for Assessment of Faecal Incontinence

S Brophy, J Deasy, D McNamara

Dept. of Colorectal Surgery, Beaumont Hospital, Dublin 9

MINIMALLY INVASIVE

Poster 10. Regional Abdominal Field Infiltration for Abdominal Wall Anaesthesia

R Ali, J McDonnell, T Farrell

Dept. of Anatomy, RCSI and Dept. of Anaesthetics, Adelaide and Meath Hospital

BREAST

Poster 11. Complementary Role for CA 15-3 with Bone Scanning in the Assessment of Metastatic Breast Carcinoma

BJ O'Daly, ADK Hill, D Kavanagh, FJ Fleming, D Evoy, EW Mc Dermott,

MJ Duffy, NJ O'Higgins

Dept. of Surgery, St. Vincent's University Hospital, Elm Park, Dublin 4

Poster 12. The Diagnostic Accuracy of Core Biopsy for Ductal Carcinoma in situ

MF Dillon^{1,4}, ADK Hill^{1,3,4}, CM Quinn^{2,3,4}, EW McDermott¹, N O'Higgins¹

1. Depts. of Surgery and, 2. Pathology, St Vincent's University Hospital, Dublin,

3. Ireland Breastcheck, Merrion Unit, National Breast Screening Programme;

4. Conway Institute of Biomolecular and Biomedical Research, UCD

Poster 13. An Analysis of the Rate of Positive Histological Yield from Completion Mastectomy

*SM Potter-Beirne, E Walsh, B Elahi, M Stokes
Dept. of Breast Surgery, Mater Misericordiae Hospital, Eccles Street, Dublin 7*

Poster 14. Removal of Multiple Sentinel Lymph Nodes: Defining the “Correct” Node

*BJ O’Daly¹, D Kavanagh¹, ADK Hill¹, E Myers¹, TB Crotty², C Quinn²,
A O’Doherty³, CD Collins³, E W McDermott¹, NJ O’ Higgins¹
1. Depts. of Surgery, 2. Pathology and, 3. Radiology, St Vincent’s University
Hospital, Elm Park, Dublin 4 and Conway Institute of Biomolecular &
Biomedical Research, University College Dublin, Belfield, Dublin 4.*

Poster 15. Development and Validation of a Novel Clinical Score that Aids in Screening High Risk Patients with Mastalgia

*A O’Connor, A Hanley, JC Coffey, RGK Watson
Symptomatic Breast Care Service, HSE, south Eastern Division*

Poster 16. RABC for the Future

*D Toomey, RA Cahill, J Rothwell, J Geraghty
Dept. of Surgery, AMNCH, Dublin*

Poster 17. Biphasic Growth Patterns in Cystosarcoma Phyllodes does not Confer more Aggressive Tumour Biology

*BJ O’Daly, PF Ridgway, T Crotty¹, P McCarthy, K J Sweeney, D Evoy,
EW McDermott, ADK Hill, NJ O’Higgins
1. Depts. of Surgery & Pathology, St Vincent’s University Hospital,
Elm Park, Dublin 4*

Poster 18. Delays in Breast Cancer Diagnosis: Does a Structured Care Pathway Influence Outcomes?

*B Piramanayagam, S Raman, AP Corder
The County Hospital, Hereford, United Kingdom*

Poster 19. Unifocal versus Multifocal Breast Cancer: Size really Matters

*B O’Daly, KJ Sweeney, PF Ridgway, D Kavanagh, D Evoy, E McDermott,
ADK Hill, N O’Higgins
Dept. of Surgery, St Vincent’s University Hospital, Dublin 4*

Poster 20. Breast Cancer Pregnancy - Implication for Diagnosis and Management

*K Tasneem, K Sweeney, MJ Kerin
Dept. of Surgery, University College Hospital Galway*

PLASTICS

Poster 21. Prospective Evaluation of Pain Score in Local Anaesthetic Procedures

*WHC Tiong, T Ismael, W Lee, PJ Regan, J McCann, JL Kelly
Dept. of Plastic, Reconstructive and Hand Surgery, University College
Hospital Galway*

Poster 22. Experience of Nipple-Areolar Complex Tattooing in St. Vincent’s University Hospital

*D O’Keeffe, M Murray, M O’Donnell
Dept. of Plastic & Reconstructive Surgery, St. Vincent’s University Hospital, D4*

Poster 23. The Way Things Were - A Comparison of Prospective and Retrospective Measures of Quality of Life

*E Fitzgerald, J O’Riordan, TM Feeley, S Tierney
Adelaide & Meath Hospital, Incorporating the National Children’s Hospital,
Tallaght, Dublin 24*

Poster 24. Post-traumatic and Post-surgical Mucormycosis in a Young and Immunocompetent Host: A case report

*WHC Tiong, T Ismael, J McCann
Dept. of Plastic, Reconstructive and Hand Surgery, Uni. College Hospital Galway*

TRAUMA AND ORTHOPAEDICS

Poster 25. Scandinavian Total Ankle Replacement (STAR) and Triple Ankle Arthrodesis – A Comparative Outcome Study

*G Colgan, AJ Butt, D Borton
Dept. of Orthopaedics, AMNCH, Tallaght, Dublin 24*

Poster 26. Experience with the Use of the Angle Bore Socket in Patients with an Increased Risk of Dislocation Following Total Hip Replacement

*J Walsh, C Hurson, O Powell, K Synnott, W Quinlan
Cappagh National Orthopaedic Hospital, Finglas, Dublin 11*

Poster 27. Use of Modular Tumour Endoprosthesis in Children with Solid Bone Tumours of Lower Extremity

*A Zubovic, M Cavanagh, B Hurson
Cappagh National Orthopaedic Hospital, Dublin*

Poster 28. Retrospective Review of Late Presenting DDH in Ireland for 2004

*M Murphy, D McCormack, F McManus
Children’s University Hospital, Temple Street, Dublin 1*

Poster 29. Prediction of Blood Transfusion Requirement in Hip and Knee Arthroplasty

*S Guerin, C Collins, H Kapoor, I McLean, D Collins, G Mullan
St. Marys Orthopaedic Hospital, Cork and Dumfries Royal Infirmary, Scotland*

VASCULAR

Poster 30. Thin Versus Ultra-Thin Dacron Patching during Carotid Endarterectomy (CEA): Mid-Term Results of a Double-Blinded Randomized Trial

*EJ Andrews, B Mahendran, N Hynes, A Jawad, S Tawfik, A Ishtiaq, D Courtney, S Sultan
Western Vascular Institute, Dept. of Vascular & Endovascular Surgery,
University College Hospital Galway*

Poster 31. In Vivo Attenuation of Myointimal Hyperplasia using Transforming Growth Factor Beta₃ in an Interposition Graft Model

MO Murphy, J Ghosh, MS Baguneid, N Khwaja, AT Halka, N Turner, CM Kieley, MW Ferguson, MG Walker
Dept. of Vascular Surgery, Manchester Royal Infirmary and UK Centre for Tissue Engineering, University of Manchester, UK

Poster 32. Alteration in Serum Metalloproteinases in Patients with Venous Ulceration undergoing Compression Therapy

SC FitzGerald SC, D Bouchier-Hayes
Dept. of Surgery, Research and Education Building, Royal College of Surgeons in Ireland, Beaumont Hospital, Dublin

Poster 33. Abdominal Aortic Aneurysm (AAA) Repair in Octogenarians versus Younger Patients in a Tertiary Referral Centre. 5-Year Survival Rate of Non Operative AAA

N Hynes, NP Koh, BJ Manning, B Mahendran, EJ Andrews, A Jawad, A Ishtiaq, D Courtney, S Sultan
Western Vascular Institute, Dept. of Vascular and Endovascular Surgery, University College Hospital Galway

Poster 34. Distaflo versus Gortex Grafts: A Prospective Comparative Analysis in Infrainguinal Supragenicular Critical Limb Ischaemia

A Jawad, N Hynes, B Mahendran, S Tawfik, E Andrews, A Ishtiaq, D Courtney, D Quill, S Sultan
Western Vascular Institute, Dept. of Vascular & Endovascular Surgery, University College Hospital, Galway

Poster 35. Open AAA Repair using Continuous Auto-Transfusion System (CATS): A Seven Year Experience

W Tawfik, N Hynes, B Mahendran, SE Tawfik, A Jawad, A Ishtiaq, E Andrews, D Courtney, S Sultan
Western Vascular Institute, Dept. of Vascular and Endovascular Surgery, University College Hospital Galway

Poster 36. Homocysteine Levels, Cardiovascular Risk Factors and Complication Rates in Vascular Surgery and Endovascular Surgery: Is There a Correlation?

D Cawley, C O'Sullivan, N Hynes, B Mahendran, J Asad, E Andrews, S Tawfik, A Ishtiaq, D Courtney, S Sultan
Western Vascular Institute, Dept. of Vascular and Endovascular Surgery, University College Hospital Galway

Poster 37. Inferior Vena Cava Filters –Indication, Safety and Long Term Results

M Ahmed, E Condon, D Mehigan, S Sheehan, MC Barry
Dept. of Vascular Surgery St Vincent's University Hospital Elm Park Dublin

Poster 38. Materialise's Interactive Medical Imaging Control System (MIMICS) and Finite Element Analysis (FEA) in Predicting Abdominal Aortic Aneurysm (AAA) Rupture – A Prospective Study in Tertiary Referral Centre

H O'Grady, EJ Andrews, N Hynes, B Mahendran, Y El Hediny, A Jawad, A Ishtiaq, S Sultan
Western Vascular Institute, Dept. of Vascular & Endovascular Surgery, University College Hospital Galway

Poster 39. How to Pioneer a Vascular Biobank. An Initial Experience

PA Sloane, S Sultan
The Western Vascular BioBank, The Western Vascular Institute, Dept. of Vascular and Endovascular Surgery, University College Hospital, Galway

GENERAL

Poster 40. Early Appendectomy or Conservative Treatment with Interval Appendectomy: Trends for Management of Appendiceal Mass in West-Midlands

T Sircar, J Shabbir
City Hospital, Birmingham, UK

Poster 41. Management of Childhood Head Injury in the General Hospital Setting

A Mohammad, A Molloy, AZS Janjua, K Barry
Dept. of Surgery, Mayo General Hospital, Castlebar

Poster 42. A Review of Colonoscopy in a County Hospital

V Anota, R Salih, L Mc Mullen, O Clinton
Dept of Surgery, County Hospital, Roscommon

Poster 43. PEG Tube Insertion-Enhanced Need for Greater Selectivity in Patient Referral?

R Khan, JC Coffey, S Siddique, JB O'Connor
Dept. of General Surgery, Waterford Regional hospital, Waterford

Poster 44. Retrospective Study on Inguinal Hernia Repair

J Ughovwa, R Salih, L McMullin, O Clinton
County Hospital, Roscommon

ONCOLOGY

Poster 45. Trigeminal Schwannomas: Different Skull Base Approaches in Three Cases

C Lim, K Aquilina, C O'Riordan, MH Kamel, J Cahill, M G O'Sullivan
Dept. of Neurosurgery, Cork University Hospital, Wilton, Cork

Poster 46. Tamoxifen as a Novel Chemotherapeutic Agent in Anaplastic Thyroid Cancer

JP O'Neill, C Condon, AM Byrne, E Kay, M Walsh, D Bouchier-Hayes
The Royal College of Surgeons in Ireland, Dept. of Surgery & Otolaryngology; The Education and Research Building, Beaumont Hospital, Beaumont, D9

Poster 47. Altered Cadherin Expression in Response to Hypoxia in Colorectal Cancer

S Brophy, D McNamara, J Deasy, E Kaye, D Bouchier-Hayes
Dept. of Surgery and Dept. of Pathology, Royal College of Surgeons in Ireland, Beaumont Hospital, Dublin 9

ENDOCRINE

Poster 48. Thyroid Autoimmunity and Malignancy

BJ O'Daly¹, D Kavanagh¹, CG Brennan², F Fleming¹, EWM McDermott¹, ADK Hill¹, NJ O'Higgins¹, PPA Smyth²
 1. Dept. of Surgery, St Vincent's University Hospital, Elm Park, Dublin 4
 2. Conway Institute of Biomolecular and Biomedical Research, University College Dublin, Belfield, Dublin 4

Poster 49. How useful is Fine Needle Aspiration Cytology (FNAC) in the Assessment of the Thyroid Nodule?

P Neary, A O'Callaghan, HP Redmond
 Dept. of Surgery, Cork University Hospital, Cork

Poster 50. Thyroid Carcinoma Presenting in a Younger Population than 10 Years Ago

AD Murphy, EJ Andrews, DS Quill
 Dept. of Surgery, University College Hospital, Galway

Session 1: Colorectal Session

1 Sulphomucin expression correlates inversely with inflammation in the mucous gel layer of the ileal pouch

Aims

The mucous gel layer (MGL) of the ileal pouch forms a critical component of the innate immune response and to date, no studies have formally evaluated it. We aimed to definitively characterise the MGL of pouches fashioned for ulcerative colitis (UC), and familial adenomatous polyposis (FAP).

Methods

Following ethical approval and informed consent, ileal pouch mucosal biopsies were harvested from patients with a background of UC (n=18) or FAP (n=10). Sulpho- and sialomucin levels were evaluated by staining with high iron diamine and alcian blue respectively. Expression levels were correlated with underlying mucosal inflammation and morphology. Expression levels were correlated with colonisation by a panel of six anaerobic bacterial species. Statistical analysis was performed using Sigmastat.

Results

Sulphomucin expression was increased in the UC pouch (P=0.001 vs. FAP pouch). Typically, sulphomucin expression was regionalised or confined to individual cells. In the UC pouch MGL, sulphomucin expression correlated inversely with increasing total as well as acute mucosal inflammatory scores (r=-0.7). Of note, no clear trend was apparent when MGL sulphomucin content was correlated with bacterial colonisation.

Conclusions

Mucous gel production is a tightly regulated phenomenon that accurately reflects underlying inflammatory events. Specifically, sulphomucin production occurs mainly in the UC pouch, is regionalised, and correlates inversely with underlying inflammation.

N Bambury, JC Coffey, FM Smith, P Hallihan, WO Kirwan

Dept of General Surgery, Cork University Hospital, Cork

2 Routine Splenic Flexure mobilization is unnecessary in anterior resection

Background

Splenic flexure mobilization (SFM) is widely considered to be an essential component of anterior resection (AR) for rectal cancer. It was our hypothesis that selective SFM would reduce operative times without increasing morbidity or effecting cure.

Methods

100 consecutive patients with rectal cancer (mean 8cm from anal verge (range 4-15cm)) who underwent AR for cure between 1996 and 2002 had SFM only as required to achieve a tension free anastomosis. Operative time, post-operative morbidity, hospital stay, pathological findings and recurrence rates were addressed.

Results

There were no clinico-pathological differences between those who had SFM (n=26) and those who did not (n=74). Mean operative time in the SFM group was longer, 167 min (range 130-200)

versus 120 min (range 95-180) in the non mobilized group (p = 0.023). Mean length of specimen resected was longer in the SFM group, 36cm (range 27-40) versus 18cm (range 13-32) (p=0.008). Anastomotic complications (4%), peri-operative mortality (2%), post op morbidity (32%), length of hospital stay (median 12 days), lymph node harvest (mean 9) and local recurrence (7%, median follow up 38 months (range 24-60)) and survival probability did not differ between the two groups

Conclusion

Routine SFM is not required for safe anterior resection in patients with rectal cancer. Avoiding SFM results in shorter operative times and does not increase post-operative morbidity, anastomotic leakage or local recurrence.

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3 Thrombomodulin expression and its clinical significance in colorectal carcinoma

Aims

Thrombomodulin (TM) is an endothelial receptor that exhibits anticoagulant, antifibrinolytic, and anti-inflammatory activity by inhibiting thrombin and cellular adhesion. Growing evidence indicates that TM plays a role in tumour behaviour and prognosis. We investigated TM expression in primary colorectal lesions, and examined the correlation of TM expression with both histological and clinical outcomes.

Methods

Immunostaining was performed on formalin-fixed, paraffin-embedded tissue sections. We examined TM expression in the primary lesions of 200 patients with colorectal carcinoma. Expression of TM was evaluated quantitatively by two independent pathologists. The grade, localisation and intensity of thrombomodulin expression was determined.

Results

Of the 200 primary tumours 195 (97.5%) stained positively for TM. 53 (27.2%) showed cytoplasmic tumour staining. TM expression showed no correlation with tumour grade, stage, or site. Importantly, 85% of TM negative tumours were poorly differentiated and 91% of TM positive tumours were well differentiated ($p < 0.01$). The 5 year survival rates of patients with positive and negative TM expression were 71% and 41% respectively. Patients who were TM expression negative showed a poorer survival rate than those with positive TM expression ($p < 0.01$), supporting the theory that TM expression is protective against metastasis.

Conclusion

This study provides further evidence that as well as having anti-coagulant and anti-inflammatory properties, TM plays a key role in tumour biology and prognosis.

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4 Prospective study on the management of patients with complicated diverticular disease

Aims

Diverticular disease is a common condition with high morbidity and mortality related to its complications. The aim of this study was to assess the predictive role of acute diverticulitis in the development of further complications from diverticular disease.

Methods

Prospective assessment of all patients with complicated diverticular disease over a year period in a large teaching hospital. All patients had documented evidence of their diagnosis by radiological, endoscopic or histopathological techniques when feasible.

Results

Seventy-seven patients with complicated diverticular disease were identified. There were 53 females and 24 males with a median age of 74 years (range 30-97). Complications included: acute diverticulitis (37), fistula (12), perforation (8), bleeding (7), abscess (7), and stricture (6). Only

eight had two or more previous documented episodes of diverticulitis. Twenty-five underwent surgery, three died (peritonitis (2), abscess(1)) and five had a complication (anastomotic dehiscence (1), adhesive obstruction (1), incisional hernia (2) and pneumonia (1)). Three of 37 patients with acute diverticulitis (5%) had two or more admissions but none underwent surgery or developed further complications. CT was performed during acute admission in 14/37 patients with acute diverticulitis. The majority of patients with fistula (9/12), perforation (7/8), bleeding (6/7) and abscess (5/7) had no previous episode of diverticulitis while most patients with stricture (4/6) had previous documented episodes.

Conclusion

In our patient population acute diverticulitis is not a good predictor of further complications from diverticular disease as only a minority of patients with perforation, fistula, abscess and bleeding had previous documented episodes of diverticulitis.

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5 Symptomatic left colonic diverticular disease in younger patients

Aims

The aim of this study was to assess the incidence and virulence of symptomatic diverticular disease in younger patients.

Methods

A retrospective review of the medical notes of the patients admitted during the period January 1994 to December 2003 were performed. Patients 45 years of age or younger with diverticulitis were included in this study. Inclusion criteria were confirmation of diverticulitis by colonoscopy, radiologically or peroperatively.

Results

A total of 365 patients were admitted in our Dept with symptomatic diverticular disease during this period. Age ranges between 21-90 years. Out of these, 34 (9%) patients were under the age of 45 years. Twenty-four were female and 10 male. Nine (27%) had perforated disease requiring Hartman's

procedure or Anterior Resection with on table lavage. Five (15%) had colovesical fistula needing definite surgery. Four (12%) patients had sealed perforation confirmed on CT scan, initially treated conservatively and had sigmoid colectomy/Anterior resection at a later date. Two (6%) presented with diverticular stricture/abscess. Eight (24%) had elective Sigmoid colectomy for recurrent attacks of diverticulitis requiring multiple hospital admissions, confirmed by radiological examination, left Iliac fossa pain, raised white cell count or pyrexia. Six (17%) patients with single episode of diverticulitis, either refused surgery or were not offered one. A total of 28 (82%) patients required surgery.

Conclusions

In this study, we conclude that the initial presentation of the diverticular disease in young patients is usually more aggressive requiring emergency/definite surgery in majority of the patients.

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6 Raman Spectroscopy A new tool for the early diagnosis of Colorectal Cancer

Objective

Traditionally identification of many diseases and cancers in the gastrointestinal tract is by visual inspection at endoscopy. But by the time cancer is visible it is usually advanced and invasive. Raman spectroscopy is a non-invasive optical diagnostic technique that enables the detection of biochemical changes that are noted in premalignancy and malignancy. Our aim was to test the use of this technique on colonic tissue.

Method

Biopsy specimens were collected from patients during routine colonoscopy. Raman spectra were measured on 92 homogeneous samples, from 53 patients, after histopathological assessment of the specimens by three pathologists. A spectral diagnostic model was constructed with 651 spectra using multivariate analysis techniques. The spectral model was tested with 164 spectra measured from 10 homogenous samples.

Results

The Raman classification model was developed with four endoscopically significant pathological groups (Normal, CIBD, dysplasia and adenocarcinoma). The model has sensitivity of 77 to 89% and specificity 88 to 96% for the classification of the different groups. The test spectra were projected onto the spectral model and 92.5% were correctly predicted as neoplastic.

Conclusion

Near-infrared Raman Spectroscopy demonstrates good discrimination between pathological states and has the potential to provide optical biopsy in the colon. It provides the possibility of helping to target biopsy selection. An endoscope probe is now being developed to use this technique for real-time endoscopic optical diagnosis.

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7 A randomized, prospective, double blind comparison of midazolam and pethidine vs propofol and alfentanil for conscious sedation in outpatient colonoscopy

Introduction

Propofol provides a faster recovery over benzodiazepines as a sedative medication. However, its use has generally been limited to anesthesiologists because of the risks associated with deep sedation. We hypothesized that propofol could safely reduce recovery time for outpatient conscious sedation colonoscopy.

Methods

In a prospective, double blinded, randomized trial, 80 adult patients received either propofol and alfentanil or midazolam and pethidine (n=40 per group) sedation. All patients underwent standard colonoscopy to the caecum by a single blinded operator. Mean arterial blood pressure, oxygen saturations and depth of sedation were monitored on a minute by minute basis during the procedure. Endpoints were, procedure and recovery times determined by neuropsychologic function scoring (return to maximum Aldrete score), time to discharge and complications.

Results

The mean dose of propofol and alfentanil administered was 48.60mg bolus (plus 45.43mg additional) and 493 mcg respectively; mean doses of midazolam and pethidine were 6.74mg and 48.8 mg. The mean procedure length for propofol was 11.5 ± 4.1 mins and midazolam 12.5 ± 4.5 mins, (P=0.3) respectively. Overall recovery was improved, the time to maximum alderete score was faster with propofol (31 mins vs. 45.1 mins; P<0.0001). Patients receiving propofol were discharged sooner (59 mins vs 1hr 34 mins; P<0.0001). Mean arterial blood pressure and oxygen saturations were equivocal in both groups (P= 0.6 and P=0.4). There were no complications in either group.

Conclusions

Propofol and alfentanil safely reduces procedure recovery time compared to midazolam and pethidine for outpatient conscious sedation colonoscopy.

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8 Influence of patients age in treatment with adjuvant chemotherapy following colorectal cancer surgery

Aims

Survival following surgical resection of Dukes B and C stage cancers of the colon and rectum is improved in patients receiving adjuvant chemotherapy, however, many elderly patients are deemed unsuitable for treatment. This study assessed use of adjuvant chemotherapy in elderly patients following colorectal cancer surgery

Methods

Prospective data of patients undergoing colorectal cancer surgery between January 2000 and January 2005 was collected using the South Eastern Health Board surgical audit system. Data collected included tumour stage, adjuvant treatment, patient co-morbidities and compliance.

Results

Over five-years 248 patients underwent resection for colorectal cancer. Suitability for adjuvant chemotherapy was considered by a consultant surgeon and oncologist in 139 patients with Dukes B and C stage tumours. Patients 80 years and older with Dukes B tumours and 70 years and older with Dukes C tumours received significantly less adjuvant chemotherapy (Table). Fewer co-morbid medical conditions were observed in patients less than 70 years. Advanced age and associated co-morbidities most frequently influenced the decision to use adjuvant chemotherapy. Comparable side effects and cessation of adjuvant chemotherapy were observed in all age groups and stages.

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Conclusions

Fewer elderly patients received adjuvant chemotherapy despite having treatment side effects similar to younger patients. Wider use of

adjuvant chemotherapy in elderly patients with Dukes B and C stage cancers may be appropriate if selection is not biased by age.

Table
TREATMENT OF PATIENTS WITH ADJUVANT CHEMOTHERAPY

STAGE	<70YRS	70-79YRS	80<YRS
Dukes B(n=60)	23/31 (74%)	9/14 (64%)	1/15 (7%*)
Dukes C(n=79)	38/39 (97%)	14/23 (61%*)	4/17 (24%**)

*p<0.001vs. age<70yrs **p<0.001vs. age<70 and <70-79yrs (ANOVA)

9 MALONE ANTERIOR CONTINENCE ENEMA PROCEDURE IN ADULTS: OUTCOME IN AN IRISH SETTING

Introduction

The anterior continence enema (ACE) is a novel method of treating faecal incontinence and chronic constipation, which involves the formation of a continent catheterisable stoma connected to the caecum through which enemas are flushed to aid evacuation. We present the first report of this procedure in an Irish setting.

Methods

Medical notes of all patients who underwent an ACE procedure in Beaumont Hospital were reviewed and underlying disease, indication, procedure performed, outcome and complications were recorded.

Results

Four patients underwent an ACE procedure. They ranged in age from 25 to 52 and two patients were male. Spina bifida was the underlying disease

in three patients and colonic inertia in one.

Isolated faecal incontinence was the indication for surgery in one patient, while the remainder had mixed faecal incontinence and constipation. An appendicocaecostomy was formed in two patients. Both of these patients stopped using the anterior continence enema within six months due to lack of effect. One proceeded to an anterior resection and end colostomy with satisfactory outcome. A catheterisable stoma was constructed from transverse colon in the other two patients. At follow-up of four years, both were continent at the stoma site and rectally. One patient required stoma revision due to prolapse.

Discussion

This is the first report of ACE procedures in Ireland. Transverse colonic conduit was more successful than appendicocaecostomy and good outcome was achieved in carefully selected patients.

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10 Mode of Presentation of Colorectal Cancer – Do Elderly Patients still Present with Advanced Disease in 2005?

We analysed all patients requiring major colorectal surgery in one service over six months. The association between mode of admission relative to age, symptom duration, tumour stage, length of ICU stay, presence of stoma and outcome were assessed.

Fourty-four patients presented for colorectal resection over six months. Thirteen were elective and 31 emergency. 61% of elective patients (8/13) had colorectal cancer whilst 68% presenting as an emergency (22/31) had a large bowel tumour. Two patients with colorectal cancer presented with advanced disease and did not have resection. Fifty per cent of elective patients were aged over sixty-five years, versus 90% of emergency patients (18/20). Only 37.5% of elective patients

had right-sided colonic tumours relative to 44% (8/18) emergency patients. Duration of symptoms averaged 11 months in the emergency group relative to two months in the elective group. Four patients in the emergency group required stoma, with no such requirement in the elective group. There was one mortality in the emergency group with average ICU stay of eight days relative to two days in the elective group.

During this same time period 406 colonoscopies were performed, with eight tumours detected and 65 polypectomies performed.

We conclude that the majority of elderly patients continue to present as emergencies with advanced level of disease despite the availability of colonoscopic services. Patient awareness and education is critical in this patient population.

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11 An audit of the management of breast cancer within a ten year period in a University College Hospital

Aim

To review how the diagnosis and management of breast cancer has changed over a 10 year period in a University College Hospital

Methods

100 consecutive breast cancer cases diagnosed in 1994/1995 were identified from the database of the breast cancer unit. Details such as mode of presentation, method of diagnosis, investigations, adjuvant/neo-adjuvant therapy and operative intervention were identified from the patient records. This was compared to a similar group of patients diagnosed in 2004/2005.

Results

Comparison of these 2 groups has suggested that the method of choice for diagnosis of breast cancer has changed towards less invasive and radiological assisted procedures rather than open surgical biopsy. Also, operative intervention trends are more towards breast sparing surgery, with reconstruction being more available to those undergoing mastectomy. With oestrogen and progesterone receptor status being routinely checked now, hormonal therapy is more selective and appropriate.

Conclusion

The management of breast cancer has changed significantly over a ten year period with more options available to the patient.

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12 The addition of ROLL to fine wire localisation of impalpable breast lesions improves clearance and overall cosmesis

Techniques that facilitate localisation and excision of impalpable breast lesions are increasing in importance. While fine wire localisation (FWL) remains the gold standard in this regard, radioguided localisation (ROLL) is gaining in acceptance.

Aims

We hypothesized that the addition of ROLL to FWL would lead to benefits in the excision of impalpable breast lesions.

Methods

In a prospective cohort-based comparative trial overall outcome was determined for patients who underwent lesion excision with FWL alone, versus those in whom FWL and ROLL were performed, in the interval from 2001 to the present. Outcome parameters included operative time, complication and clearance rates, and patient satisfaction. Statistical analysis was performed using Sigmastat© with $P < 0.05$ taken as significant.

Results

Sixty-five localisation procedures (15 were FWL alone and 25 were FWL and ROLL) during the interval. The mean specimen volume ($p = 0.04$), diameter ($p = 0.02$) and number ($p = 0.05$) were significantly reduced in patients who underwent FWL plus ROLL versus FWL alone. Significantly, there was reduced incidence of positive margins (8% in the FWL+ROLL group versus 26% in the FWL alone group). Overall, patient satisfaction was equal in both groups, and while postoperative pain scores tended to be reduced in the FWL+ROLL group this was not found to be statistically significant ($p = 0.24$)

Conclusions

The addition of ROLL to fine wire localisation of impalpable breast lesions, maintains patient satisfaction and reduces the incidence of involved margins in resected specimens. ROLL, as an adjunct, thus represents a more effective technique for the localisation and excision of impalpable breast lesions.

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Session 2: Breast/Endocrine Session

13 An assessment of adequate margin status in breast conservation surgery

Aims

The definition of a clear margin in breast conservation surgery is uncertain. The purpose of this study was to correlate the tumour-margin distance of the excision specimen with the presence of residual tumour at re-operation, and also to analyse predictors of positive margins and of residual disease.

Methods

All patients undergoing breast conservation surgery for invasive disease from 1999-2003 were reviewed. Pathological characteristics and the precise tumour distance from the radial margin were recorded. A radial margin was compromised if invasive or (ductal) in-situ carcinoma was <5mm from the margin.

Results

612 patients underwent breast conservation for invasive disease. Of the 161 patients who had re-operation for compromised margins 87 (54%)

had residual disease. Residual disease following re-excision was present in 58% (56/96); 56% (9/16); and 45% (22/49) of those with tumour-margin distances <1mm; ≥1 and <2mm; and ≥2 and <5mm respectively. There was a progressive decline in residual disease for each millimetre until a rate of 22% for tumour-margin distances of ≥4mm and <5mm was reached. Pathological size ($p=0.004$), extensive intraductal component ($p=0.002$), referral from a symptomatic clinic ($p=0.02$) and the absence of a preoperative diagnosis by core biopsy ($p<0.0001$) was predictive of positive margins. Only young age (<45yrs) was predictive of finding residual disease on re-operation ($p=0.02$).

Conclusion

45% of those that had tumour at a distance of 2-5mm from the radial margin had residual disease on re-operation. Our results support a policy of requiring a 5mm margin in patients undergoing breast conserving surgery for invasive disease.

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14 Clinicopathological factors in surgical strategy for cystosarcoma phyllodes

Cystosarcoma Phyllodes (CSP) is often clinically diagnosed as a Fibroadenoma (FA) with resultant additional surgical interventions required to clear margins. We reviewed our clinicopathologic perioperative evaluation of CSP to identify factors that may impact on surgical strategy.

All patients histologically coded CSP between 1993-2004 were reviewed. Fifty-three cases were identified. Three were excluded based on subsequent review conferring alternate diagnoses. Perioperative demographic, clinical (including mode of presentation) radiological and pathological presentations were investigated.

The median age was 50.25 years (range 21-73). Eighty-six percent presented to the symptomatic service and 14% were incidental radiological findings. The mean size of the tumours was 4.2 cm (range 1-26). A mean of 1.54 operations were carried out to clear margins initially. Fine needle aspiration was carried out in 42%, coded suspicious in only a third. Core needle biopsy in 72% defined CSP in 19% and raised the possibility in a further 39%. Seventy-six percent had imaging which was coded suspicious in 37%. Overall 19% had a definitive preoperative diagnosis of CSP. Postoperatively, histological grade did not correlate with recurrence ($r=0.01$; Spearman).

We conclude that where there is clinical suspicion, CSP should be considered even in the presence of a benign core biopsy.

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15 Analysis of false negative mammography in patients with symptomatic breast disease

Aim

False negative mammograms may result in a delay in diagnosis and has implications for patient care. This study sought to identify characteristics of symptomatic patients with false negative mammograms and to analyse the reasons contributing to a missed diagnosis on mammography.

Methods

984 symptomatic breast cancer patients with true positive preoperative mammograms were compared with 124 patients with false negative mammograms. The clinical presentation, diagnostic method and pathology were analysed in both groups. False negative mammograms were reviewed by a specialist breast radiologist.

Results

Patients with false negative mammograms were more likely to present with nipple discharge ($p=0.002$) and with smaller tumours ($p<0.0001$). Their tumours were more frequently

located outside the upper outer quadrant ($p=0.002$). Retrospective review of false negative mammograms re-categorised 42% of these mammograms as suspicious. The most commonly misinterpreted lesion in this symptomatic population was architectural distortion/asymmetrical density and 71% of false negative mammograms were of moderate or marked density. Adjuvant ultrasound ($n=25$) raised the level of suspicion in 92% of cases where this was performed. A preoperative histological diagnosis of breast cancer was significantly reduced in the false negative group compared to controls (65%vs 85%; $p<0.001$). False negative mammography led to a delay in diagnosis > 2 months in 11 patients.

Conclusion

Symptomatic patients with false negative mammograms often demonstrate definite abnormalities on imaging, the most common of which is architectural distortion/asymmetrical density. Ultrasound is a highly useful diagnostic tool in preventing a delayed diagnosis of breast cancer.

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16 Clinically detected breast cancer in women of screening age-group – urgent need for national breast cancer screening

Aim

Early detection of breast cancer by screening mammography offers benefits in terms of improved prognosis and long-term survival as well as an increased likelihood of breast conserving surgery. The aim of this study was to assess the prognosis of breast cancer in women of screening age-group presenting symptomatically to a breast cancer service.

Methods

Patients diagnosed with breast cancer at University College Hospital Galway between July 2004 and March 2005 were identified from our breast cancer database. Details of patient age, tumour size, histological grade and lymph node stage were identified and the Nottingham Prognostic Index (NPI) for each case of invasive breast cancer was determined.

Results

In total 149 new breast cancer cases were diagnosed during this period. The mean age was 57.6 years. Seventy-three cases (49%) were in women aged between 50 and 68, i.e. those who would have been eligible for screening since the commencement of the National Breast Cancer Screening Programme in certain regions. In this age-group there were 60 invasive and 13 pre-invasive cancers diagnosed. The mean tumour size for invasive cancer was 2.8cm (T2) and in 53% of cases there was axillary lymph node involvement at time of diagnosis. NPI for those with invasive cancer was 4.47, i.e. moderate prognosis.

Conclusion

Almost half of all clinically detected breast cancer cases diagnosed during this period were in women of screening age-group, many of whom had advanced disease at presentation. This highlights the urgent need for full implementation of the National Breast Cancer Screening Programme.

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17 Breast cancer in the southeast; an audit prior to the introduction of screening

Aims

We present an audit of a regional breast centre prior to the introduction of breast screening, to define present workload and practice, analyse quality assurance parameters (QA), and provide a starting point to allow measurement of the impact, breast screening will have.

Methods

We obtained data on the 164 women that were diagnosed with breast cancer in the southeastern region of Ireland, in the year prior to the introduction of screening. All aspects of their presentation and management were analysed using prospectively collected data.

Results

Greater than 80% of triple assessment breast clinic referrals were seen within two weeks; all patients had pre-operative mammography; greater than

95% of patients had a preoperative diagnosis and a nodal staging procedure was performed in >90% of women undergoing a breast cancer resection. The data obtained was compared with symptomatic cancer data in the UK (ref) where screening has been in operation since 1990. The southeast saw more invasive disease (98% 'V' 91%), observed a greater amount of node positive disease in all age groups (e.g. 35-49 year olds; 65% V 42%), and performed more mastectomies than the UK (68.6% V 45.8%). Women in the screening (50-64) age group comprised 29% of the southeast workload.

Conclusion

In the absence of a screening programme, breast cancer in the southeast is presenting at a more advanced stage. Screening can be expected to reduce the workload of the symptomatic clinic by 25 - 30%. This data allows effective planning and resource allocation.

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18 Predictors of invasive disease in breast cancer when core biopsy demonstrates dcis only

Ductal in situ disease on core does always not preclude invasive disease on excision necessitating later axillary surgery in substantial number of patients. We sought to identify preoperative predictors of invasion when DCIS is present on core.

Methods

From a database of 895 breast cancer patients, all those who had a preoperative diagnosis of DCIS on core were identified. Their preoperative mammography and subsequent excision pathology was analysed to determine features that may be predictive of invasion.

Results

Ninety-three breast cancer patients had a preoperative diagnosis of DCIS on core biopsy.

Following excision, 31 patients were diagnosed with invasive disease, and 12 patients with micro invasion. A preoperative finding of calcification only on mammogram was associated with DCIS on excision ($p=0.014$). The presence of other mammographic features ($p=0.014$) or tumour size ≥ 5 cm was associated with increased risk of invasion ($p=0.018$). Fifty two percent of those diagnosed by ultrasound guided core biopsy ($n=12/23$) had frank invasion on excision compared to 19% diagnosed by stereo tactic techniques ($n=11/57$) ($p=0.003$).

Conclusion

Mammographic features and tumour size are useful in predicting invasion in patients who have DCIS on core biopsy only. Patients who have features other than calcification on mammography or have tumour size ≥ 5 cm should be considered for a sentinel node procedure.

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19 Sestamibi scan directed minimally invasive video assisted parathyroidectomy: an effective treatment for solitary parathyroid adenoma

Aims

Solitary adenomas have been shown to be responsible for almost 90% of cases of primary hyperparathyroidism. The purpose of this study was to determine the utility of sestamibi scanning pre-operatively to guide minimally invasive video assisted (MIVA) parathyroidectomy.

Methods

The charts of 40 successive patients presenting to one surgeon at a tertiary referral centre with primary hyperparathyroidism were reviewed retrospectively. Age, sex, sestamibi scan result, preoperative calcium, and parathormone levels, operative procedure and pathological diagnosis were noted.

Results

Thirty-three (82%) of patients were female. Average age of patient was 60 years (12.3 SD). All patients underwent a pre-operative sestamibi

scan. Thirty-three (82%) patients had a localized adenoma on sestamibi scan. Of these patients 29 underwent attempted MIVA parathyroidectomy. This was successful in 22 patients, with seven having to be converted to an open procedure. In four cases this was due to thyroid enlargement and in three cases because the parathyroid adenoma was not in the position indicated by sestamibi. When pre-operative sestamibi scanning was correlated with pathological diagnosis it was shown to have a sensitivity of 83% and positive predictive value of 88%.

Conclusion

Pre-operative sestamibi scan localization of a parathyroid adenoma offers an 88% positive predictive value for adenoma location. This facilitates MIVA parathyroidectomy, with its lower morbidity and costs, to be used effectively to treat primary hyperparathyroidism in the majority of patients.

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20 A combination of minimally invasive radioguided parathyroidectomy and intra-operative pth assay accurately predicts resection of parathyroid adenomas

Aims

The role of gamma probe activity and intra-operative parathyroid hormone (PTH) assay is well established in the surgery of primary hyperparathyroidism. The aim of this study was to assess the accuracy of these techniques as predictors of successful resection of a parathyroid adenoma.

Methods

Fifty-one patients undergoing surgery for a suspected parathyroid adenoma were prospectively analysed. All patients had a sestamibi scan performed three hours pre-operatively. PTH levels were recorded pre-operatively and five minutes after excision of a suspected adenoma. We used the combination of histological diagnosis and normalization of post-operative serum

calcium levels to define successful resection of a parathyroid adenoma. Statistical analysis was performed using the Wilcoxon Rank test.

Results

An ex-vivo count of 40% over the resected specimen and a 45% decrease in PTH levels were significantly associated with a histologically confirmed parathyroid adenoma ($p=0.018$ and $p=0.021$ respectively).

Conclusions

A combination of ex-vivo gamma probe activity counts and intra-operative PTH assay accurately predicts resection of a parathyroid adenoma.

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Session 3: Orthopaedic Trauma Session

21 Fractured neck of femur in Cork City and County 1994-2003 – changes in demographics and lifetime hip fracture risk

Aims

Hip fracture is a significant public health problem worldwide and remains the most serious manifestation of osteoporosis. International published data has shown an increase in the incidence of hip fractures with significant implications for health service providers. Our aim was to examine the incidence and demographics of hip fractures in Cork over a 10 year period.

Methods

All persons resident in Cork city and county admitted to CUH with a hip fracture from 1994-2003 were entered into the study. Population statistics for Cork city and county was obtained for years 1991, 1996 and 2002 from the CSO. Using a linear calculation we determined the age and sex specific population for the cork area for the years 1994-2003 and calculated life time fracture risk.

Results

Eighty-eight per cent of male fractures and 98% of female fractures occurred in the over 50 age group. In total there were 3784 hip fractures in the 10 year period. The male:female ratio was 1:2.74. There has been a statistically significant decrease in incidence in 70-74 year old men and 75-79 year old women ($P < 0.05$). The incidence of hip fractures in the over 80's however, is increasing ($P = 0.01$). There was a statistically significant increase in the lifetime risk of hip fracture in females of all ages, greatest in women aged 60 ($P < 0.001$).

Conclusion

Despite increased screening and treatment of osteoporosis the burden of hip fractures continues to rise. The increasing incidence of hip fracture in the over 80 age group will have significant implications both in terms of operative morbidity and post operative rehabilitation and placement.

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22 Ten year comparative audit of patient transportation times to a regional orthopaedic unit

Aims

Merlin Park Regional Hospital is the orthopaedic referral centre for Mayo General Hospital, Portiuncula Hospital, Roscommon General Hospital, and University College Hospital Galway. We present an audit of transportation times of 102 consecutive acute admissions from these associated peripheral hospitals, in 2004, and comparison of these results with raw data collected on 102 consecutive acute admissions in 1994.

Methods**Questionnaire:**

Double-sided form

1. Patient Questionnaire
2. Doctor Questionnaire

Both completed at time of admission

Analysis

- Admission Profile
- GP Involvement

- Six Aspects of Transportation Time
 1. Primary Transportation Time (site of injury to local hospital)
 2. Time Spent In First Hospital
 3. Time Spent Between Arrival at First Hospital and First Assessment
 4. Time from Patient Acceptance to Arrival in MPH
 5. Secondary Transportation Time (local hospital to MPH)
 6. Overall Transportation Time

- Location Injury Occurred
- Modes of Transport Used
- Injury Profile
- Mechanism of Injury
- Procedure Profile

Results

In both 2004 and 1994 there is much variety in the range of transportation times from each hospital to Merlin Park Regional Hospital. Often

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these times do not correlate well with the severity of the injury or the need for prompt definitive orthopaedic treatment. There has been a minor general improvement in transportation times since 1994, however.

Conclusion

Time between injury and surgery has been shown to be an independent predictor of outcome in patients with both isolated limb, and multiple, trauma. Transfer times, unfortunately, are still unacceptably long in some cases.

23 Ankle fractures in the geriatric population: operative or non-operative treatment

Aims

The optimal management of ankle fractures in the elderly is controversial, with wide variation in the complication rates reported in the literature. In elderly patients surgery carries increased risks due to osteoporosis, poor skin condition and decreased vascularity.

Methods

We performed a retrospective review (X-rays, medical and nursing notes) of outcome and complications in patients over 70 years of age with ankle fractures. Patients were admitted for manipulation under anaesthetic and application of cast (MUA) or open reduction and internal fixation (ORIF).

Results

A total of 134 patients over the age of 70 were admitted for management of ankle fractures during January 1995 and December 2003 and 117

of these were included in the study. Eighty-four were operatively treated for ankle fractures and a further 27 patients underwent MUA. The mean age in both groups was 76 and there was a female predominance in both groups. The median length of stay was shorter for the conservatively managed group. 7.5% of the MUA group required a second intervention compared to 4.5% of the operatively managed group. There were three wound complications in the operatively managed group. The rate of postoperative medical complications was the same in both cohorts.

Conclusion

The decision-making process for treatment of ankle fractures in the geriatric population is challenging. We observed significantly better functional results in the ORIF group than the MUA group indicating that ORIF of ankle fractures in geriatric patients is efficacious and safe in selected patients.

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24 Spinal injuries in Irish rugby - a 10 year review

Aims

Over 90,000 players are registered with the Irish Rugby Football Union (IRFU). We report a 10-year series of spinal injuries presenting to the National Spinal Injuries Unit (NSIU) at the Mater Misericordiae University Hospital .

Methods

A large series of spinal injuries in rugby players was isolated utilizing the NSIU database, HIPE and data from the IRFU. An extensive chart review and telephone interview was performed to determine age, mechanism of injury, possible aetiological factors, anatomic location of injury, American

Spinal Injuries Association (ASIA) scores and response to rehabilitation.

Results

From 1994 to 2004, 22 rugby players with spinal injuries necessitated admission to the NSIU. Twelve patients (54%) presented with neurology. The average age at time of injury was 21.1 years (range 14 – 44 years) and all patients were male. The average length of hospital stay was 10.1 days (range 1 – 45 days). The most common mechanism of injury was hyperflexion of the cervical spine, with C5/C6 most commonly injured. Sixty-eight per cent of injuries occurred in the tackle situation

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and 32% in scrums, rucks and mauls. Winger, Full Back and Hooker were the playing positions at greatest risk. Nine (41%) patients underwent surgery and 11 (50%) required rehabilitation. Eight (36%) patients felt that their injury was preventable. Of those patients without neurology, 60% have returned to playing rugby.

Conclusion

During the period under review, eight players suffered permanent disability. Serious spinal injuries continue to occur and recent rule changes have had little effect in reducing their incidence.

25 Mean streets - Patterns of firearm injury presenting to an Irish acute General Hospital

Aims

Due to a perceived increase in the incidence of firearm injuries we undertook to study this phenomenon with the aim of quantifying the number of injuries and characterising the nature of the clinical and resource burden this caseload represents.

Methods

Data relating to patient demographics, injury pattern and treatment were collected prospectively from patients presenting to the emergency Dept over a 64-month period between 01/01/2000 and 30/04/2005.

Results

During the period of the study there were 38 shootings in 36 patients with a progressive increase in incidence year on year. Predominantly young males (M:F 18:1), mean age of 26.05 years. The shotgun was the most utilised weapon. All

but two cases were considered by the patient to be intentional i.e. assaults and none were self-inflicted. Seven patients were dead on or shortly after admission, giving a mortality rate of 18.42%. Only 5.2% were fit for discharge from the emergency Dept. The mean length of stay was 9.34 days (range 1-57 days). The majority required the care of one or more specialists and 42.1% required one or more surgical procedures (mean number of procedures required 3.62).

Conclusion

We have identified an increasing trend in the incidence of firearm injuries, these patients are overwhelmingly young males who sustain their injuries as the result of an assault. The treatment of these patients is resource intensive, with a wide range of expertise required, resource intensive multidisciplinary care is required in the majority of cases and multiple trips to theatre are necessary in most.

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26 Osteoporosis management in Ireland - who does and who should?

With an aging population, and an expected doubling in numbers of septagenarians between 1990 and 2020, we are seeing a predicted increase in osteoporosis and resultant fractures.

The International Osteoporosis Foundation (IOF) surveyed consultant orthopaedic surgeons in Europe and New Zealand to determine how patients with osteoporotic fractures were managed. The study aimed to see how Irish practices and opinions related to the IOF survey.

Methods

A modified IOF survey was sent to 85 Consultant Orthopaedic Surgeons in Ireland. The questionnaire evaluated education and knowledge of osteoporosis management, and estimated numbers treated for osteoporosis and investigations available.

Results

The response rate of over 50% was higher than that of our European colleagues, and showed that only 25% of Irish surgeons felt they received sufficient training in osteoporosis

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management, but only a minority were not confident managing the disease. One-quarter would treat a patient with a fragility fracture for osteoporosis themselves, while over half would refer the patient to a General Practitioner (GP) for further management. Fifty per cent would order bone mineral densitometry, and nearly three-quarters believe the GP should follow up these patients. Significantly, 15% did not have access to densitometry. The most popular treatment

is a combination of calcium and vitamin D supplementation in conjunction with Alendronate.

Conclusion

There is a lack of standardisation in the management of patients with osteoporosis. While the disease and its treatment is an important issue, nationally there is a dearth of specialised services and implementation of treatment algorithms, due in part to lack of investigative facilities and organised management teams.

27 Work related injury presenting to a regional orthopaedic service

1.4 million work days were lost in 2002 due to work-related injury resulting in significant morbidity and economic loss.

Aim

To investigate the epidemiology of work related injury presenting to a regional orthopaedic service.

Methods

Patients presenting with work-related injury over an eighteen month period were identified from the operative register and hip.

Results

134 patients were identified. The mechanism of injury involved crush injuries in 57, accidental lacerations in 41 and falls from a height in 40. The majority of accidents involved construction workers (55%) with industrial work place injuries next most common (13%). 69% of patients were Irish with 31% of accidents involving non-national workers who make up a smaller proportion

of the workforce. Hand trauma was the most common presentation involving 68% of patients, predominantly with soft tissue lacerations or crush injuries. Radial fractures were the most common bony injuries. These work related injuries resulted in an average length of stay of 5.1 days and 3.5 subsequent follow up clinic appointments. Average length of stay was significantly longer in non-national workers indicating a greater severity of injury in these patients. On average 10.7 working weeks were lost per patient. Twelve patients have not yet returned to work or have retired following injury.

Conclusion

Despite significant investment, work related injury remains a common cause of orthopaedic referral resulting in significant morbidity and loss of production. These injuries appear to be both more common and more severe in non-national workers. This group should be targeted in any future work-related injury prevention strategy.

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28 Analysis of Current Administrative Database Coding for Spinal Surgery

Aims

Hospital administrative databases are used to establish health care utilisation and cost and also to set health care policy yet few data exist in the literature regarding database coding for spinal surgery. We aimed to investigate the accuracy of spinal procedure coding systems completed by

administrative staff and to determine the effect current administrative coding has on hospital policy and departmental funding.

Method

A retrospective analysis of the 250 most recent spinal surgery cases at our unit was performed.

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The records of all patients were independently reviewed by two surgeons and were assigned correct ICD-9-CM coding. The diagnostic codes assigned by the surgeons were compared with the ICD-9-CM codes that had been assigned during the ordinary course of events by personnel in the medical records Dept.

Results

The ICD procedural codes contained in administrative databases under represented the complexity of spinal surgical procedures actually performed. The accuracy of coding was also found to vary depending on the diagnosis. In particular, cases utilising extensive instrumented fusion were

associated with a high level of false negative coding. Cost analysis based on the current administrative database for spinal surgery demonstrated a 38% increase when coding was corrected.

Conclusion

This study found that the accuracy of a diagnosis of a spinal disorder recorded in an administrative database varies according to the specific condition being evaluated and has major implications for cases requiring spinal instrumentation. The current coding system in administrative databases may impact negatively on the quality of information available for setting hospital policy and departmental funding.

29 Thromboembolism prevention practices in an Irish orthopaedic population

Aims

To determine treatment regimes for thromboembolism prophylaxis in the orthopaedics population across different risk groups.

Methods

Ninety letters were sent to Irish orthopaedic consultant surgeons - a simple 'tick the box' approach. The clinical case scenarios consisted of three groups as follows:

- 1) Low risk: a routine hip replacement,
- 2) High risk: a knee replacement on a background of pulmonary embolism and
- 3) Trauma: a hip fracture.

The treatment choices included: Nothing, TEDS, Compression devices, eg, AV boots, Greenfield filter insertion pre-operatively, Hypotensive anaesthesia, LMW Heparin, Aspirin post-operatively, low dose Warfarin, and regular Warfarin. More than one box could be ticked and space was provided for additional treatment regimes.

Results

Fifty-four completed returns were received (60% reply rate). The three most popular options in all three cases were early mobilisation, TED stockings and low molecular weight heparin. Less than 20% of all patients were prescribed aspirin. More than 80% of high-risk patients had no pre-operative intervention. Thirty-seven per cent of all knee replacements with a history of PE got no form of anti-coagulation after discharge, 73% of all routine hips got no anti-coagulation after discharge, and 77% of all hip fractures got no anti-coagulation after discharge.

Conclusions

While LMW Heparins are not conclusively shown to safely and effectively reduce the rate of symptomatic thromboembolism, it is the most popular chemothromboprophylactic agent. Conversely, despite unequivocal results in the PEP trial, less than 20% of all patients were prescribed aspirin, which was surprising given that it shows that aspirin safely reduces the risk of DVT/PE.

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30 The relationship of the sciatic nerve to the tendons used for ACL reconstruction in the posterior thigh: an anatomical study

Introduction

Reconstruction of ruptured anterior cruciate ligament using medial hamstring tendons (semitendinosus and gracilis) is becoming more common. A recent case study reported injury to the sciatic nerve during the harvest of semitendinosus graft¹. Although morbidity arising from iatrogenic injury to nerves at the anterior aspect of the knee has been well documented, little has been written to document this.

Rationale

This study proposes to examine the relationship between the medial hamstring tendons (semitendinosus and gracilis) and the sciatic nerve in the posterior thigh.

Methodology

Twenty legs on ten cadavers underwent the same dissection to expose the semitendinosus tendon, gracilis tendon and the sciatic nerve while maintaining their anatomical relationships. The distance between the closest point of the sciatic nerve to the tendon of semitendinosus was measured at the joint line and at intervals of 2 cm from the joint line.

Results

In all cases the gracilis lay further away from the sciatic nerve than the semitendinosus tendon and so it was omitted from further study. In 45% of the subjects the sciatic nerve and the semitendinosus tendon gradually moved further apart as the measurements were taken more proximally from the joint line, and in 10%, 10%, 15%, 10% at 6 cm, 8 cm, 10 cm and 12 cm from the joint line respectively the sciatic nerve and the semitendinosus tendon consistently moved apart.

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Session 4: Vascular Session

31 Mesenteric traction during open abdominal aortic aneurysm repair may lead to intestinal ischaemia

Aims

Intestinal manipulation and mesenteric traction during open transperitoneal abdominal aortic aneurysm (AAA) repair may lead to intestinal hypo-perfusion and the development of systemic inflammatory response syndrome. The aim of this study is to assess if intestinal manipulation and mesenteric traction will result in intestinal ischaemia.

Methods

Thirty-four patients undergoing open AAA repair were randomised into three groups. Group I (n=11) underwent repair via a retroperitoneal approach while Group II (n=12) and Group III (n=11) were repaired via the transperitoneal approach with the bowel packed within the peritoneal cavity or exteriorised in a bowel bag respectively. Tonometric measurement of gastric intramucosal pH (pHi) was performed to assess intestinal perfusion just prior to aortic clamping,

during clamping, and at 0.5h, 1h, 2h, 4h, 6h and 12h after clamp release. Patients with persistent low pHi measurements (i.e., pHi < 7.30 on at least 50% of the time points) were considered to have significant diminished gastric mucosal perfusion.

Results

The operative time, aortic clamp time, amounts of blood lost and transfused and the pre-clamp gastric pHi were similar between the three groups. The number of patients with persistent low pHi measurements less than 7.30 was greater in GpIII (10/11) in comparison to GpI (5/11). The fall in gastric pHi was also significantly more sustained in GpIII compared to GpI (p < 0.01).

Conclusion

These results suggest that the retroperitoneal approach of repairing AAA can minimise intestinal ischaemia by avoiding mesenteric traction that is associated with the transperitoneal approach.

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32 Infrainguinal arterial reconstruction – does gender influence outcome?

Aims

The effect of gender on long-term results of infra-inguinal arterial reconstruction remains controversial. In this study we analyse the outcome of infra-inguinal bypass procedures performed over a ten year period and stratify the results by gender.

Methods

A retrospective analysis of infra-inguinal arterial reconstructions performed between 1995 and 2005 was performed. Demographics and adverse outcomes were analyzed. Statistical significance was determined using the chi-square test.

Results

Eighty procedures were analysed. The male to female ratio was 1:1. Women were significantly older (69 years versus 63 years), less often diabetic (25% versus 40%), and less often smokers (75%

versus 85%). The mean follow up was 8.4 years. The mean ASA grade in both groups was three. The 30 day limb loss rates and mortality rates were similar for males and females. The five-year patency rate was 60% for males and 45% for females (p=0.03). The five year limb salvage rate was higher for males than females (90% versus 70%) p=0.021. Females had also more post operative vascular complications than males (55% versus 15%)

Conclusions

Female gender may be a negative predictor of outcome after infra-inguinal arterial reconstruction.

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33 A Prospective Observational Longitudinal Study of Pharmacological Manipulation in Abdominal Aortic Aneurysm (AAA) Surgery: Are Statins, Beta-blockers and Anti-platelet Therapy the Best Combination?

Cardiac morbidity and mortality are the most frequent complications post AAA surgery. The primary aim of our study is to compare the effect of cardio-selective beta-blocker alone or as part of the 'Magic Bullet' (pre-operative Nuseal Aspirin 300mg, Pravastatin 40mg, and Bisoprolol 5mg, and post-operative Clopidogrel 75mg for one year).

We reviewed two cohorts of patients undergoing AAA surgery. Primary endpoint was perioperative mortality and 30-day myocardial infarction (MI). Secondary endpoint was renal protection.

Forty-two consecutive patients undergoing AAA surgery between January 1999 and July 2000

(beta-blocker group) were compared with 40 consecutive patients between January 2001 and July 2003 ('Magic Bullet' group), (Table 1).

There was no statistical significance in the beta-blocker group, however there were fewer MIs and renal complications in patients in the 'Magic Bullet' group with lower 30-day mortality. All were statistically significant.

Beta-blockers alone do not provide adequate cardio-protection in AAA surgery. The Magic Bullet reduced the incidence of perioperative renal and cardiac morbidity and 30-day mortality. Our protocol is the 'Magic Bullet' for all patients undergoing vascular surgery.

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Table 1

	PRE-OP SS-BLOCKER	NO SS-BLOCKER	P VALUE	MB AAA	AAA	P VALUE
Number	21	21		20	20	
Male:Female	15:6	16:5		14:6	13:7	
Mean Age (years)	70	71		70.5	71.5	
ASA III / IV	76%	71%		87%	74%	
Myocardial Infarction	2 (9%)	4 (18%)	0.09	10.7%	19.1%	0.03
Renal failure	1 (4.7%)	3 (14%)	0.3	4%	14%	0.04
30-day mortality	1 (4.7%)	3 (14%)	0.4	4%	14%	0.04

34 An observational parallel group comparison study of duplex ultrasound arterial mapping (DUAM) with magnetic resonance angiography (MRA) and conventional angiography (CA) as sole pre-operative investigative tools for endovascular revascularizations

DUAM is accurate in evaluation of lower extremity arterial disease; however MRA and CA are commonly used. We compared clinical and haemodynamic outcome in critical limb ischaemia (CLI) following Endovascular revascularisation (EvR) based on pre-operative DUAM with those based on CA or MRA.

Between October 2002 March 2004, 86 patients underwent EvR as primary procedure for CLI. All were Rutherford Classification III/IV. Twenty-four per cent had aorto-iliac and 76% infra-inguinal revascularisation. Outcome measures were symptom relief, increase in Ankle-Brachial Index (ABI), and duplex scan at day-1 and six-weeks. Patency, limb salvage, morbidity, mortality and length of stay (LOS) were compared. Statistical analysis used nonparametric t-test, Mann-Whitney U and Chi-Squared.

Differences occurred between targeted and treated lesions in the three groups (Table 1).

Differences in ABI increase occurred between groups; Day-1: DUAM vs CA (p=0.746) vs MRA Differences in ABI increase occurred between groups; Day-1: DUAM vs CA (p=0.746) vs MRA (p=0.034*) and six-weeks: DUAM vs CA (p=0.043) vs MRA (p=0.03).

Primary patency at day-1 and six-weeks for DUAM was 100% & 96.3%; 100% & 93% for CA and significantly lower at 85% (p=0.03) & 78% (p=0.04) for MRA. Limb-salvage rates at six-weeks were 100%, 100% and 94% respectively.

No significant difference in mortality or morbidity. Number of admissions were lower and LOS shorter in DUAM (p<0.0001).

Successful EvR achieves adequate inflow to normal target vessels. MRA overestimated stenosis with venous contamination of tibial vessel imaging.

CA accurately outlined the lower extremity arterial tree, but DUAM also identified echolucency in those unsuitable for EvR.

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Table 1

	LIMBS	TARGET LESIONS	LESIONS ANGIOPLASTIED
DUAM	32	36	36
CA	34	35	35
MRA	33	49	41

35 Haemoglobin A1c (HbA1c) in nondiabetic vascular patients. Is HbA1c an independent risk factor and predictor of adverse outcome?

Diabetics with HbA1c >7% have increased risk of microvascular and macrovascular complications. Our aim is to determine if elevated HbA1c is associated with adverse outcome in non-diabetics and diabetics undergoing vascular procedures. Primary endpoint is postoperative morbidity and mortality. Secondary endpoint is length of hospital stay.

Plasma HbA1c was measured prospectively in 157 consecutive patients over six-months. Clinical data was entered into a prospectively maintained database (VascuBase). Non-diabetics were further stratified into two groups, HbA1c <6.0% (normal) or >6.0% (abnormal). Diabetics were also divided, HbA1c <7.0% (normal) or >7.0% (abnormal). Statistical analysis used two-tailed t-test and multivariate analysis.

One hundred and seventeen patients (74.5%) were non-diabetic. Overall mean age was

72-years and 59.4% were male. Abnormal HbA1c was found in 59.8% non-diabetics and 47.5% diabetics. Non-diabetics and diabetics with abnormal HbA1c had a significantly higher complication rate (6.25% vs 23.4%, p = 0.001 and 8.3% vs 32.6%, p<0.05) than those with normal HbA1c. Diabetics with abnormal HbA1c had a significantly longer length of hospital stay (20 days vs 37 days, p <0.001). Multivariate analysis demonstrated that elevated HbA1c is a significant independent predictor of adverse post-operative outcome in non-diabetics and diabetics. Abnormal HbA1c did not significantly affect mortality.

A significant proportion of non-diabetics undergoing vascular surgery have HbA1c of 6.1 - 7%, which was a significant independent predictor of increased length of stay, stroke, myocardial infarction, amputations and mortality after vascular surgery in non-diabetics. Diabetics with abnormal HbA1c have increased length of hospital stay. Tighter diet control and pharmacological manipulation are mandatory.

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36 Demographic changes in the level and numbers of amputees since the introduction of Subintimal Angioplasty (SIA). Influence of Deliberate Practice on Limb Salvage Rates and Long-term in Critical Lower Limb Ischaemia (CLI): A 15-years experience

Costs of managing post-amputation CLI patients are twice that of successful limb salvage, justifying aggressive revascularisation policy. Aim of the study is to assess whether deliberate practice with SIA has influenced limb-salvage rate and amputation level.

From January 1989-March 2004, 1268 patients were admitted with CLI. 829 underwent

revascularisation (bypass 671, angioplasty 158), while 439 had primary amputations. Patients were divided into 2 groups, depending on whether they were admitted prior to or since SIA availability.

Cumulative-survival and limb-salvage rates were calculated using Life-Table Analysis. Multivariate analysis was performed with Cox proportional hazards model to determine effect of patient demographics, disease presentation and treatment modality on amputation-free survival-rate.

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Revascularisation-rate increased with introduction of SIA, from 60% to 82% ($p < 0.001$). Amputation level (AKA:BKA) did not vary significantly. Thirty-day morbidity, mortality and length of hospital stay were significantly lower post-SIA ($p < 0.05$).

Ten-year survival rates were 42.5% (SE 2.7%) for primary amputation and 44.4% (SE 2.09%) for bypass. Three-year survival rates for primary amputation, bypass and SIA were 54.0% (SE 2.46%), 60.1% (SE 1.88%) and 75.8% (SE 3.49%).

Five-year cumulative limb-salvage rate is significantly higher post-SIA (85.6% SE, 2.30%) than pre-SIA (66.5%, SE 2.14%).

Risk of amputation following revascularization was positively associated with procedure type, renal function and diabetic status.

Technical advances have resulted in steadying of amputation numbers despite rising population age and disease complexity. SIA improves symptom-free survival rate, is minimally invasive, cost effective, and associated with a high limb-salvage rate. Deliberate practise with SIA for limb-salvage in vascular units is warranted.

37 Efficacy of cerebral protection during carotid artery stenting: objective evidence from diffusion-weighted MRI

Aims

To examine the efficacy of cerebral protection devices in preventing cerebral insult during carotid angioplasty and stenting (CAS) and to evaluate diffusion weighted MRI as a method of assessing such injury.

Patients & Methods

The first 100 patients who had attempted CAS in our unit were included in this series. The procedure was abandoned in three patients, the remaining 97 being divided into Group A (n=18) who had no cerebral protection device, and Group B (n=79) who had a cerebral protection device deployed during the procedure. Patients underwent diffusion-weighted MRI prior to, and following CAS and underwent a formal neurological assessment in the Intensive Care Unit after the procedure.

Results

One hundred procedures were attempted in 78 patients. Twenty-eight per cent were

asymptomatic. Following CAS, 7% of patients had a positive neurological exam and 20% had positive DWI scans, equating to a sensitivity of 86% and a specificity of 85% for DWI in detecting cerebral infarction following CAS. The positive predictive value of the test was 0.3 and negative predictive value 0.99, with a likelihood ratio of 5.7. Use of a cerebral protection device significantly reduced the incidence of both clinical (5% in CPD vs. 25% in non-protected, $p < 0.05$, Fisher's Exact Test), and DWI-detected subclinical cerebral infarction (18% CPD vs. 33% in non-protected, $p < 0.05$, Fisher's Exact Test).

Conclusions

Diffusion-weighted MRI is a useful adjunct to the assessment of patients pre and post CAS. Use of cerebral protection devices during CAS is associated with a reduced incidence of clinical and subclinical cerebral injury.

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38 A prospective observational study of carotid artery stenting (CAST) under neuro-protection and carotid endarterectomy (CEA) in high-risk patients — short term results

CEA has been the gold standard in stroke prevention, but in high-risk patients, surgery risk might outweigh protective benefit. Aim of our study is to compare CEA with CAST in high-risk patients regarding technical and clinical success and efficacy in reducing morbidity and mortality.

From October 2001-2004, 680 patients were treated with carotid artery disease; 116 had intervention. Forty-one were ASA III or higher and assigned to CEA or CAST. Three had bilateral interventions. Duplex was sole imaging modality for quantifying plaque-type and percentage stenosis. Patients with serpentine internal carotid arteries and echolucent plaques had CEA. High-risk factors for CEA were previous CEA, neck dissection, radiation therapy, unstable angina, class III heart failure, FEV₁ < 30%. CAST patients had Clopidogrel

300mg pre-operatively, local anaesthesia; Angioguard[®] filter wire; primary stenting using Xact[®] tapered stent; post-stenting dilatation and Perclose[®] automatic suture system. CEA patients had general anaesthetic; routine shunting; tacking; and ultrathin HemaCarotid[™] patch.

Both groups mean age was 71, male to female ratio 2:1 and symptomatic to asymptomatic ratio 4:1. All asymptomatic patients had contra-lateral occlusions. There were significantly more high-risk factors in CAST ($p < 0.05$). There was no stroke, MI or death within 30 days. An 84 year-old CAST patient had hyper-perfusion and RIND with no angiographic evidence of embolisation and recovered. Length of HDU/ hospital stay was lower in CAST, $P < 0.01$ and $P < 0.05$. There was no statistical difference in one-year patency between groups ($P > 0.05$).

CAST is evolving as a safe, effective, first-line therapy in high-risk patients for CEA.

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39 Non-operative management of critical limb ischemia (CLI): initial short term experience with a biomechanical device

In a significant proportion of patients with CLI revascularisation is not feasible due to anatomical or co-morbid factors.

Our aim is to report our initial experience with ArtAssist[®] device in patients with CLI. Primary endpoints were limb salvage and symptomatic patency. Secondary endpoints were changes in ABI and toe pressures.

From August to November 2004, 34 patients presented with CLI. Of these, 10 (12 limbs) were not suitable for revascularisation and were treated with ArtAssist for 12 weeks. Exclusion criteria were severe infection, DVT and inability to tolerate compression. All patients were given best medical treatment and had a duplex scan and ABI, initially and at 4-weeks intervals thereafter. MRA was done in those anatomically unsuitable for reconstruction.

Male:female was 7:3. Mean age was 77.5 years (range 58-89 years). Six patients were included due to anatomical factors and four due to co-morbidities. All patients were at least Rutherford classification IV and ASA III. Six patients were diabetic, and two were immobile. The paired-student's t test was used. ABI increase of 0.05 was taken to be clinically significant.

Limb salvage was 100%. There was significant relief of rest pain, and significantly reduced analgesia requirements from week 1 onwards. Gangrene remained dry and non-progressive with no need for antibiotics. ABI increased significantly ($t = 1.911$, $df = 11$, $p < 0.05$). There were no complications related to use of the device.

ArtAssist increases limb salvage rates, reduces length of hospital stay and relieves symptoms of CLI in patients with significant co-morbidities and no option of revascularization.

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40 Factors predicting mortality in 178 consecutive patients undergoing surgery for ruptured abdominal aortic aneurysm.

Aim

Surgery for ruptured abdominal aortic aneurysm is associated with significant mortality. The aim of this study is to evaluate current mortality and assess whether preoperative risk factors can accurately predict operative mortality.

Methods

A retrospective analysis was carried out for the five Hardman index factors (age >76 years, loss of consciousness, haemoglobin < 9 gm %, creatinine >0.19 mmol/L and ECG evidence of ischaemia) in 178 patients undergoing surgery for ruptured abdominal aortic aneurysm in two teaching hospitals between January 2000 and December 2004.

Results

The mean age of the patients was 73.9 years (range, 51-94) with a male to female ratio of

5.4:1. The overall in-hospital mortality was 57.3% (102/178) with a slightly lower mortality in women 43% (12/28) compared to men 60% (90/150); $p=0.09$. Using a multivariate analysis, only age >76 years ($p=0.04$, OR 2.29, 95% CI 1.03-5.11) and ECG ischaemia ($p=0.03$, OR 2.93, 95% CI 1.12-7.67) were found to be sensitive predictors of mortality. The operative mortality was 44%, 46%, 68%, 79% and 100% for Hardman's score 0, 1, 2, 3 and 4 respectively.

Conclusion

These results concur with that of Hardman's, who demonstrated a correlation between the number of positive factors and mortality. However, contrary to their findings, our results show survival even with three positive factors and hence repair should not be denied in high risk patients (Table 1).

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Table 1
PERCENTAGE OPERATIVE MORTALITY BY NUMBER OF POSITIVE CRITERIA IN TWO GROUPS

NUMBER OF POSITIVE CRITERIA	BELFAST	HARDMAN
0	44	16
1	46	37
2	68	72
3	79	100
4	100	100

Session 5: Gastrointestinal Session

41 Surgery remains the primary treatment of choice for gastrointestinal stromal tumours

Aims

Gastrointestinal stromal tumours (GIST) are gastrointestinal sarcomas with an incomplete myogenic or neural phenotype predominantly expressing C kit and/or CD34 surface markers. Although surgical resection was the gold standard of treatment, the development of a targeted molecular therapy (imatinib), has led some to question whether surgery remains the primary modality of choice and therefore we wished to review our experience of GIST in the imatinib era.

Methods

All cases of GIST admitted between April 2003 and March 2005 were reviewed. Patients were recruited from the hospital's histological database and a retrospective chart review was performed. Patient demographics, presentation, treatment and follow up were analysed.

Results

Eight patients diagnosed with GIST were identified, with a mean age of 55 years and male to female ratio of 1.6 : 1. Six patients had en bloc resection whilst one patient had an endoscopic excision. One patient had evidence of metastatic disease at a median follow up of 13 months. This patient, along with a patient who had unresectable disease, was treated with imatinib and both currently have stable disease.

Conclusion

Surgical resection is the gold standard for treatment of GIST. However, these are the first tumours for which targeted molecular therapy is successful and provides a bright future where tumours are unresectable or for those patients with metastatic disease.

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Table 1
GIST FEATURES

GIST PRESENTATION	GIST ORIGIN	HISTOLOGICAL RISK
GI Bleeding (n=3)	Stomach (n=4)	Low (n=1)
Incidental (n=2)	Duodenum (n=1)	Intermediate (n=3)
Pain (n=3)	Jejunum (n=2)	High (n=4)
	Unknown (n=1)	

42 The application of proton pump inhibitors in long term use

Aims

To retrospectively analyse the quantity and indications for prescription of Proton Pump Inhibitors for long term use in patients with no active Peptic Ulcer Disease or Gastro-Oesophageal Reflux Disease.

Methods

Random 102 Medical patients were used for analysis. All patients were without active PUD/GORD. Average age is 73.5 (SD 6.3) years including 49 men and 53 women. Prescriptions were written

by four independent participant doctors which later, as well as discharge summaries, patient notes and theatre notes formed the basis of the research.

Results

On discharge, 49.5% of all random patients were routinely taking a PPI. Of the PPI patients, 21% of these had previously undergone OGD and diagnosis of peptic ulcer disease or gastro-oesophageal reflux disease (4 male, 7 female). Patients previously diagnosed with PUD/GORD

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were continually prescribed a PPI. The remaining 79% had no diagnosis or impending OGD. 58% were also on NSAID, Warfarin, Steroid or Bisphosphonate (44%, 12%, 8% 2% respectively, some on >1). Patients not with PUD/GORD and not on NSAIDS, Steroids or Warfarin but on a PPI added up to 42%.

Lansoprazole was prescribed in 40% of cases, omeprazole in 28%, and esomeprazole in 22% in those prescribed PPI. However, the maintenance

and therapeutic regimes across different PPIs were not consistent.

Conclusions

Almost 80% of patients are prescribed a PPI without diagnosis from OGD. Contrary to the recommended guidelines, 42% of patients on long term PPIs have no gastric diagnosis, are not on gastro-irritant medication and are not followed up with OGD.

43 The impact of mrsa infection post-whipple's pancreatotomy: a 10-year experience

Methicillin resistant Staphylococcus aureus (MRSA) is a nosocomial pathogenic gram-positive bacterium which is prevalent worldwide. MRSA infection has been shown to result in substantial morbidity and mortality post-surgery in orthopaedic and otorhino-laryngology units. The effect of MRSA on patients post-Whipple's pancreatotomy has not yet been examined.

Aims

Examine the morbidity associated with nosocomial MRSA infection post-Whipple's pancreatotomy and determine its impact on treatment costs and utilization of resources.

Methods

A retrospective cohort analysis of all patients undergoing Whipple's resection (n=118) over a 10-year period (1995-2005) was carried out. MRSA positive cases had MRSA isolated from at least one site, MRSA negative cases were the controls.

Multiple factors were recorded including duration of hospital stay, number of days to diagnosis of MRSA, related morbidity and need for re-operation. Additional costs of treatment were examined.

Results

Nosocomial MRSA affected 19% of patients undergoing Whipple's resection. 41% of MRSA positive cases developed subsequent infection warranting systemic antibiotic therapy. Mean time post-surgery to colonization was 9.5 days and mean time to diagnosis of clinical infection was 18.2 days. Morbidity included cellulites (4), wound dehiscence (3), anastomotic breakdown (2), pneumonia (4) and septic arthritis (1). Twenty-seven per cent of MRSA cases required further surgery. The mean in-hospital stay was prolonged in MRSA positive cases (41.7 vs. 26.1 days, MRSA positive vs. control)

Conclusions

MRSA infection is a significant cause of morbidity in patients following major pancreatic surgery. Prevention of MRSA cross-infection is essential if we are to minimize its impact on patient care and healthcare resources.

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44 Cholangiocarcinoma - a 10-year experience in a specialist hepatobiliary unit

We report an audit of the management of cholangiocarcinomas presenting to a specialist hepatobiliary unit over a 10 year period. The incidence and pattern

of referrals of this rare tumour-type to a specialist hepatobiliary unit in Ireland has not been reported to date.

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Aims

The aim of our audit was to document the prevalence and mode of presentations to our unit, the investigations that had been carried out (if any) prior to presentation, the investigations that we perform in diagnosing and staging these tumours, and the incidence of resectability in those presenting to our unit. We also aim to highlight the use of the various modalities employed in the treatment of these tumours, the incidence of use of these modalities and to compare our results to national and international data.

Methods

Data was collected retrospectively from the charts of 60 patients that have presented to our unit

over the period April 1995 to April 2005 who were diagnosed with cholangiocarcinoma. We classify the tumours into intrahepatic, perihilar, or distal (extrahepatic) biliary tree, exclusive of the ampulla of Vater., we also include gallbladder cancers. We divided the extrahepatic bile ducts into perihilar and distal segments, with the transition occurring at the point where the common bile duct lies posterior to the duodenum.

Results

60 patients who presented to our unit, 48 of which had been referred by other units. Ultimately just over half of these went on to have resections, other treatment modalities including stenting, brachytherapy and liver transplantation.

45 Reliability of Symptom Questionnaires in patients with Gastro-oesophageal and Laryngopharyngeal reflux

Aims

Laryngopharyngeal Reflux (LPR) is defined as retrograde extraoesophageal reflux of gastric contents into the larynx, pharynx, trachea & bronchus. Clinical manifestations and symptoms of LPR are atypical for gastro-oesophageal reflux disease (GORD) although heartburn is the most frequent and typical symptom. Our hypothesis was that GORD patients with objective evidence of LPR should also have positive LPR symptomatic scores.

Methods

Five hundred and thirty two consecutive patients referred to our GI Function unit with GORD symptoms were asked to complete two validated

questionnaires: (1) patient symptom index (PSI) for GORD and (2) reflux system index (RSI) for LPR. All patients then had oesophageal manometry followed by 24 hour pH monitoring. A subgroup of these patients (n=119) had simultaneous oesophageal and pharyngeal 24 hour pH monitoring.

Results

PSI was highly predictive for oesophageal reflux and LPR. RSI did not predict LPR. (Table 1)

Conclusion

GORD patients with LPR, documented by 24 hour ambulatory pH monitoring do not exhibit typical ENT symptoms.

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Table 1

	+VE PSI	+VE RSI	N
+ve acid Score	80%	35%	324
-ve acid Score	52%	31%	208
+ve LPR	85%	37%	46 (82% +ve acid score)
-ve LPR	69%	49%	73 (56% +ve acid score)

46 An update on comparable roles of ultrasonography and magnetic resonance in the biliary tract

Aims

The role of magnetic resonance imaging (MRI) in the diagnosis of pancreaticobiliary pathology is well recognized. Ultrasonography (US) continues to play a pivotal role however. With escalating health costs the expense incurred in obtaining MRI requires justification. The aim of this study was to provide an update on the comparable roles of US and MRI in a group of patients with suspected biliary tract disease over a four-year period. This study provides encouraging and enlightening account as compared to the previous observations.

Methods

Sixty-one patients were recruited. All underwent abdominal US and MRI. The indications for US included abdominal pain (76%) jaundice (28%) and/or deranged liver function tests (77%). Indications for MRI included suspected choledocholithiasis, clinically (37%) and ultrasonographically (36.5%), suspicion of

pancreatic pathology (13%), cholangiocarcinoma (5%) or an inconclusive ultrasound (8.5%).

Results

Ultrasound identified common bile duct (CBD) dilatation in 26.5%. A normal study was identified in 54%. Pancreatic pathology was described in 13% (carcinoma, cyst, inflammation). Cholangiocarcinoma was seen in 5%. Inconclusive studies accounted for 8.5%. MRI identified CBD dilatation in 26%. A normal CBD was identified in 62%. Pancreatic pathology was confirmed in 13%. Cholangiocarcinoma was identified in 5%.

Conclusions

In conclusion, MRI confirmed all positive ultrasound findings. The principle benefit of MRI was in establishing findings in the 8.5% of inconclusive ultrasound studies. We suggest that adopting a more selective practice could reduce the demand and associated cost implications of MRI.

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47 A prospective randomised trial evaluating an anti-reflux stent in the palliative treatment of carcinoma of the lower third of the oesophagus

Background

Palliation of inoperable oesophageal cancer with covered stents aims to relieve progressive dysphagia and improve quality of life (QoL), however introducing a stent across the oesophago-gastric junction in lower third tumours may predispose to unchecked gastro-oesophageal reflux (GOR). Oesophageal stents incorporating an anti-reflux valve have been introduced to address this debilitating problem prompting us to prospectively compare anti-reflux stents with standard stents in the palliation of inoperable lower third oesophageal tumours.

Methods

Twenty-nine consecutive patients with malignant dysphagia were randomised to receive a standard (n=17, Group 1) or an anti-reflux stent (n=12, Group 2).

QoL was assessed before stenting, one week after and again at two months with the EORTC QLQ-C30, QLQ-OES24 and reflux questionnaires. Modified DeMeester symptom scores and oesophageal pH measurements were also calculated. The Wilcoxon-Mann-Whitney rank-sum test assessed general QoL, symptom and pH scores in both groups.

Results

Both groups reported significantly improved QoL, health and dysphagia scores at one week and two months after stenting. Group 2 patients reported significantly better DeMeester symptom and general reflux scores at week 1. At 2 months DeMeester symptom scores remained significantly better. Group 2 patients demonstrated significantly better DeMeester scores on ambulatory pH monitoring.

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Conclusion

Standard and anti-reflux stents afford comparable relief from dysphagia and improved quality of life in patients with inoperable lower third oesophageal cancer. Anti-reflux stents are however

significantly better at controlling symptomatic and physiologically relevant reflux. They should be promoted as the standard of care when palliating this select group of patients.

48 Laparoscopic nissen fundoplication - the learning curve: a DGH experience

Background and Objectives

Most surgeons experience a long learning curve to become proficient in performing laparoscopic procedures. This study aims to evaluate the initial experience and feasibility of laparoscopic Nissen fundoplication performed for GORD in a DGH.

Methods

All cases of laparoscopic fundoplication performed by an upper GI surgeon with special interests in minimal access surgery between March 2001 and February 2005 were considered retrospectively.

Results

Laparoscopic fundoplication was attempted in 30 patients of whom 27 patients underwent the procedure successfully. The median age was 38 (19-67) years, of which 16 were females. Most patients

were of ASA 1 or 2. The mean hospital stay was 3(±1.63) days.

Loose 360° Nissen fundoplication was performed laparoscopically in 22 patients. There were three conversions, all of which occurred during the initial half of the study period. The mean operative time was 117(±26) minutes. There was no mortality. Dysphagia was the only complication of note in four patients, none of whom required any further intervention. Four patients continued to be symptomatic and are being evaluated at the time of study.

Conclusions

This study shows that laparoscopic Nissen fundoplication is a safe and feasible procedure with an acceptable morbidity and conversion rate in a DGH.

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49 A technique for surgical closure of the complex abdomen

Management of the open abdomen in the setting of massive visceral swelling or extensive intra-abdominal abscess may pose an extremely difficult surgical scenario. We herein describe a new technique used in a patient with abdominal catastrophe after intra-abdominal infection.

The Wittmann Patch is a Velcro-like fascia prosthesis designed specifically for temporary abdominal closure. It is composed of two sheets of Velcro like biocompatible material, which are sutured to fascial edges. The two sheets adhere to each other when compressed together to form a secure temporary closure and are peeled apart

to allow abdominal re-entry. The Patch is easily adjusted to provide decompression while at the same time allowing tension to be applied to the fascia to prevent retraction.

Methods

A 54-year-old man developed considerable visceral swelling following a laparotomy for intra-abdominal infection and primary closure could not be achieved. Temporary abdominal closure was achieved by using a presterilized 3-litre cystoscopy fluid bag. A Wittmann Patch was then inserted.

Results

As abdominal swelling decreased, excess patch material was trimmed, and the fascial edges were pulled closer together. When the two fascial edges

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were close enough, the remaining patch material was removed and the abdominal wall closed, fascia-to-fascia (Day12).

Conclusions

The Wittmann Patch is effective for temporary bridging of abdominal wall openings where

primary closure is not possible and/or repeat abdominal entries are necessary. In properly selected patients, this technique avoids the use of mesh or additional surgical procedures such as skin grafting or plastic surgical reconstruction of the abdominal wall.

50 Raised faecal calprotectin levels in patients with right iliac fossa pain: a non-invasive predictor of acute appendicitis

Background

Despite advances in medical investigation the rates of negative appendectomy remain unchanged. We investigated whether faecal calprotectin levels (FCP), a bowel lumen inflammatory marker, could accurately diagnose acute appendicitis.

Methods

Sixty-four consecutive patients presenting with RIF pain were recruited. Faecal samples were analysed for FCP by ELISA. All underwent laparoscopy on clinical grounds. FCP levels were compared to white cell count, c-reactive protein, erythrocyte sedimentation rate, temperature and heart rate and correlated with the final diagnosis. The diagnostic accuracy of each parameter was tested using receiver operating characteristic (ROC) curves.

Results

There were 43 (67%) cases of gastrointestinal (GIT) pathology of which 38 (60%) had acute appendicitis. FCP was raised in 14 patients (22%), each of whom had GIT pathology. Raised FCP levels were associated with the presence of GIT pathology ($p=0.003$). Likelihood ratio calculation and ROC analysis indicate that FCP is second only to leukocytosis in predictive power. In the presence of RIF pain raised FCP has 100% specificity for GIT pathology and 88% specificity for acute appendicitis.

Conclusion

We suggest that a high FCP level indicates definite intra-luminal pathology and in the setting of RIF pain is highly specific for acute appendicitis and warrants mandatory laparoscopy.

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Session 6: General Orthopaedic Session

51 A prospective, randomised, controlled trial comparing Subacromial Bursa block with intrascalene block in patients undergoing arthroscopic subacromial decompression

Aims

We compared the effect of intrascalene block (ISB) and subacromial bursa block (SBB) in patients undergoing arthroscopic subacromial decompression.

Methods

Fifty-three ($n = 53$) patients scheduled for arthroscopic subacromial decompression were randomised into three groups receiving Intrascalene block ($n = 19$), Subacromial Bursa block ($n = 19$) or neither of the two blocks ($n = 15$ controls). Patients with cuff pathology were excluded. ISB was performed preoperatively with 20 mls of 1% Prilocaine and 10 mls of 0.5% Bupivacaine. SBB was given with 20 mls of 0.5% Bupivacaine postoperatively. Pain, sickness and sedation scores were noted at 1, 2, 4, 8, 12 and 24 hours postoperatively. The postoperative consumption of morphine and the time when the first bolus of morphine was required were also noted.

Results

The pain scores in the ISB and SBB group were lower than the control group in the first twelve hours postoperatively. The controls consumed more morphine postoperatively (mean 32.3 mls) than SBB (21.21 mls) and ISB groups (14.00 mls) ($p < 0.001$). The time for first bolus was earlier in the controls (mean 30.2 mins) as compared to both SBB (72.7 mins) and ISB groups (105.8 mins) ($p < 0.001$). The oral analgesic intake was less in the SBB and ISB groups than the controls ($p = 0.004$), but there was no difference between the two treatment groups.

Conclusion

Whilst intrascalene block remains the gold standard after subacromial decompression, subacromial bursa block is a safe alternative in patients with intact rotator cuff.

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52 Experimental investigation of negative pressure intrusion techniques of acetabular component cementation in total hip arthroplasty

Aims

The aim of this study is to develop and evaluate a model which simulates negative pressure intrusion (NPI) cementation techniques and to use this to elucidate the effects of this technique on the cement bone interface.

Methods

Samples of cancellous bone are machined to create cylindrical specimens. Eight specimens were created and assigned to NPI and control groups. The NPI group specimens are subjected to negative pressure using clinical suction (Cherion, Czech Rep) in a custom rig. Polymethylmethacrylate cement is applied to the bone within the rig and subjected to a constant positive external pressure via a 2Kg weight applied to the sliding arm of the rig until the cement has cured. Control is provided by an identical process in the absence of vacuum. Bone-cement constructs are removed en bloc and cement intrusion depth is ascertained with

the use of MicroCT. The mean intrusion depth is calculated for each sample using 2D CT slices of known dimensions.

Results

There is tendency toward deeper cement interdigitation in the samples created using the NPI. The overall mean intrusion depth in the NPI group was 8835 μ m compared to 4893.75 μ m in the control group. Giving a greater mean cement intrusion of 3941.25 μ m using NPI cementation.

Conclusions

We conclude that the model accurately mimics the operative technique and the use of microCT allows accurate non-destructive assessment of intrusion depth leaving samples intact for mechanical testing. The association of cement intrusion depth with increased mechanical strength has been shown in the literature.

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53 Risk factors for predicting urinary catheterisation in the first 24 hours post lower limb arthroplasty – a prospective study

Aims

Urinary retention post lower limb arthroplasty is a common problem and the direct relationship between urinary tract instrumentation and deep sepsis in total hip replacement is well documented. This study tries to identify those patients at high risk for urinary retention.

Methods

This prospective study analysed 164 male patients who underwent primary arthroplasty between September 2004 and March 2005 inclusive. Patients who had previous urological intervention for obstructive symptoms were excluded from the study. Upon admission and prior to surgery, all patients answered an 8-point urinary symptom questionnaire and were tested on their ability to micturate while supine.

Results

Thirty-four patients required urinary catheterisation, 130 did not. The average age of the catheterised group was 69.5+/-10.7 years

(range: 45-90) and the non-catheterised group was 65.2+/-10.5 years (range: 33-85). There was no difference between these groups ($p=0.134$, ANOVA). Similarly, there was no difference ($p=0.919$, ANOVA) between the blood loss in the 2 groups, 880.6+/-455.5 mls and 895+/-533.7 mls respectively. With regards to the symptom questionnaire, the average score in the catheter group was 3.1+/-2.4 and the non-catheter group was 2.0+/-1.8 ($p=0.034$, ANOVA). Supine micturation was of no predictive value with 22 patients in the catheter group able to do so.

Conclusion

These results show the value of a pre operative urinary symptom questionnaire in predicting those who may require post-operative catheterisation. By appropriate use of this tool, patients with potential for post-operative retention may be identified before surgery and consequently, this group should be catheterised pre-operatively thus reducing their risk of infection.

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54 Quantitative assessment of helmet visor contamination in total hip arthroplasty

Aim

The aim of this study is to document the risk of splash contamination of the face of those directly involved in total hip arthroplasty.

Method

A prospective study was conducted over a 6-month period. We collected one hundred and two face visor portions of the surgical helmet system (Stryker Sterishield T4 System) used in primary and revision hip replacements. The position of the individual (surgeon, first assistant or second assistant), the type of prosthesis (cemented, uncemented or hybrid) and the use of pulse lavage were recorded. The visors were scanned using an Epson Precision 2580 scanner at 800dpi. Splash area was calculated with Image J 1.34i.

Results

Every face visor collected had evidence of blood or splash contamination. The most heavily contaminated masks were those of the first assistant. The greatest area of contamination for all individuals was seen with the use of uncemented acetabular components. There was no significant difference in the contamination between primary and revision procedures.

Conclusion

The risk of facial and eye splash injury in orthopaedic surgery is significant. With the wide area and scatter of splash contamination seen in this study we suggest that eye protection should be worn by all directly involved in primary and revision hip arthroplasty.

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55 Contamination in cemented arthroplasty — a four-year follow up of deep wound contamination

Despite exhaustive prophylactic measures intra-operative contamination still occurs following cemented arthroplasty. We undertook a prospective study to identify the incidence of intra-operative deep wound contamination in cemented joint arthroplasty, and assessed incidence at four years of wound contamination.

Methods

Eighty-two patients admitted for elective cemented arthroplasty were enrolled in the study over a six month period. All cases were undertaken in ultra-clean laminar air flow theatre. The surgical team wore isolation suits in all cases. Swabs from skin incision and wound were sent in addition to the blades and suction tip. Cultures were typed by morphology and identified by standard techniques.

Results

Fifty-nine cases were total hip replacements and 23 total knee replacements. Five procedures were performed for revision arthroplasty. Nineteen of the 82 cases (23%) examined grew contaminating organisms with *S. epidermidis* being the commonest organism (16). Twelve patients had two contaminated specimens and one had three contaminated specimens. No significant correlation between the duration of the case, number of personnel in theatre or the seniority of the operating surgeon was demonstrated. On medium term follow up (mean 49.6 months, 95% CI 3.2 months) no patient had developed clinical evidence of infection.

Conclusion

We noted a high incidence of intra-operative contamination of cemented arthroplasties despite standard prophylaxis. However this was not reflected by a similar rate of post-operative infection. This may be due to a small bacterial inoculum in each case or possibly may be due to the therapeutic effect of perioperative intra-venous antibiotic prophylaxis.

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56 Variation in position of the L4/5 disc inter-space from Tuffier's line — review of 450 radiographs

Aim

Investigation of variation between Tuffier's line (drawn between the two highest points on the iliac crests) and the L4/5 disc interspace, in varying patient age groups.

Methods

Four-hundred and fifty AP and lateral lumbar spine radiographs (age range 20-90yrs). Patients with obvious deformity or previous spinal surgery were excluded. In AP films, Tuffier's line was drawn between the iliac crests. From this line, the distance to the midpoint of the L4/5 disc was measured. This was achieved in lateral films, by finding the midpoint between the two iliac crests and again measuring the distance from this point to the midpoint of the L4-5 disc.

Results

In all age groups measured, the true L4-5 disc inter-space lay below Tuffier's line. In the patient group at 20 - 30 years, Tuffier's line lay on average 1.86mm above the L4-5 disc space. At 30 - 40 years, average = 2.49mm

above the disc space. Forty to 50 years, average = 6.05mm above. Fifty to 60 years and 60 - 70 years, average = 3.17 mm above. Seventy to 80 years, average = 4.5 mm above. Eighty to 90 years, average = 9.06mm above. Analysis using ANOVA system to assess statistical significance. Comparison of the patients aged 20 - 30 years versus patients aged 80 - 90 years yielded a p value of $p=0.0045$. Sixty to 70 years vs 80-90 years, $p=0.0049$. Fifty to 60 years vs 80 - 90 years, $p=0.0023$. 30 - 40 years vs 80 - 90 years, $p=0.0004$. 70 - 80 years vs 80 - 90 years, $p=0.03$. Other patient group comparisons of low statistical significance.

Conclusions

The L4/5 disc inter-space broadly corresponds to Tuffier's line, however, there is significant variation between different age groups and within individual age groupings. Therefore, it is advisable to perform a pre-operative AP and lateral radiograph of the lumbar spine, to enable accurate incision placement when performing spinal surgery in this area.

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57 Evaluating the quality of 'quality of life' studies in spinal journals

Aim

Despite the increase in quality of life articles, the actual quality of these quality of life articles has not improved.

Methods

Six major journals were chosen. All abstracts during 1998-2002 inclusive which determined quality of life, clinical or functional outcome, patient satisfaction or efficacy were chosen. A total of 607 articles qualified of 1815 articles read. The articles were scored according to the Gill & Feinstein criteria and the Velanovich criteria.

Results

The number of articles increased from 16% in 1998 to 52% in 2002 ($p=0.02$). In 1998, 14% of studies fulfilled three or more of the Gill & Feinstein criteria as compared to 17% in 2002 ($p=0.3$). The median Velanovich score in 1998 was 1 and this was unchanged in 2002 ($p=0.8$). Appropriate statistical analysis was performed in 28% of studies in 1998 and in 63% in 2002 ($p=0.018$).

Conclusion

Despite the increase in quality of life studies, there is no significant improvement in the quality of these studies.

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58 Significant psychological and functional improvement following surgical treatment of lumbar spondylosis

Aim

We assessed the incidence of pre-operative functional impairment, anxiety and depression in patients presenting for spinal surgery. In addition, the medium term outcome on functional and psychological parameters following surgery was evaluated.

Patients & Methods.

Sixty-seven patients were evaluated prior to surgery. All patients admitted by the spinal service for decompressive surgery (microdiscectomy alone or microdiscectomy with spinal decompression) over a three year period were enrolled. Patients were evaluated 4 - 6 weeks pre-operatively with the Oswestry Disability Index (ODI) and the Hospital Anxiety and Depression Score (HADS). Patients were followed up in the clinic and /by telephone with the same.

Results

Post-operative follow up was available on 53 patients (79.1%). Mean duration of follow up was

2.2 years (95% C.I. + 0.9). Forty-three patients (64%) presented with nerve root compression on the basis of MRI scans, having predominantly lower limb symptoms with the rest having back and/or leg pain. 23 patients underwent micro-discectomy alone, while 30 patients had micro-discectomy combined with lumbar decompression.

79.2% had improved functional status on the basis of the ODI. In addition, both the Anxiety and the Depression parameters of the HADS demonstrated an improvement of 25.8% and 32.4% respectively. Dural tears occurred in 4 (7.5%) patients and recurrence of symptoms requiring further procedures occurred in 9 (16.9%) patients

Conclusion

Our study indicates that the ability to rapidly relieve pain following nerve root impingement has a dramatic benefit in improving psychological distress and physical function and is maintained up to four years.

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59 The weight of a patients' hospital chart as a predictive factor of post operative morbidity following Lumbar Spinal Decompression

Aim

To show that the weight of a patients' chart is an independent predictor of post operative outcome.

Methods

This prospective study examined the outcome of 92 consecutive patients who underwent lumbar spinal decompression. Data collected included patient demographics, pre-operative ASA score, operative time, operative blood loss, length of stay in hospital and the weight of the chart pre-operatively.

Results

There were eight patients with an ASA score of IV, 30 with an ASA score of III, 29 with an ASA score of

II and 25 with an ASA score of I. The mean weight of the chart for patients with an ASA of I/II was 740 grams and statistically different from ASA III-IV which was 1263.75 grams ($p=0.021$).

There was a positive correlation between ASA III/IV and post operative morbidity (correlation coefficient $R^2 = 0.81$). There was a positive correlation between chart weight and post operative morbidity (correlation coefficient $R^2 = 0.91$). There was no correlation between patient age, gender or duration of symptoms with post operative morbidity. There was a trend towards correlation with operative time and blood loss although this was not significant.

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60 3-D Motion analysis of lumbar spine motion in athletes during weight lifting, using the Zebris system

Aim

To view the degree at which athletes flex and extend their lumbar spines, during light and heavy weight lifting. Also, to investigate, whether exercise induced fatigue results in increased movement beyond the normal flexion/extension range.

Materials and Methods

Using the Zebris three-dimensional motion analysis system, we assessed the lumbar spine movements, during repetitive in line squat lifting by 20 high performance athletes, in whom weight lifting forms a regular part of their training. The subjects performed 5 squat exercises (in a controlled setting) with an Olympic bar (20kg) and then with a weight of 60kg.

Results

The average weight of the subjects used was 78.3kg, with an average height of 188cm. The average flexion with the bar (20kg) only was 2.43 +/- 1.27 degrees, while the average extension

was 19.2 +/- 0.17 degrees. At the heavier weight, the average flexion was -10.6 +/- 0.96 degrees (i.e. 10.6 deg within the extension range). The average extension recorded was 28.23 +/- 4.97 degrees ($p=0.044$ versus bar alone, Student's t-test).

Conclusion

These results show that at the heavier weight, the range of flexion/extension is wholly within the extension range. This demonstrates a significantly increased extension load on the lumbar spine during heavy weight lifting. Further work is required to elucidate the potential pressure effects that this hyperextension is having on the lumbar spines of athletes, particularly in younger athletes, who form the most vulnerable group performing this exercise.

Conclusion

The positive correlation of a patients' chart weight with post operative morbidity is significantly greater than for the ASA Score.

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Session 8: General Session

61 Operative workload: a surgical trainee's experience

In the current climate of debate regarding duty hours, experience of surgeons in training, delivery of specialist surgical services and centralisation, we have evaluated the operative exposure available to a first year surgical trainee.

Objectives

Our aim was to determine if the operative workload at a district general hospital fulfills the Royal College's ITP and assessment requirements on a six monthly basis.

Methods & Results

Over a six month period, 1010 surgical procedures were performed by one of three surgical services at the institution. Four hundred and twenty-nine (42%) of these were day ward based.

The SHO was the principle supervised operator at 378 (37%) of these procedures, the registrar at 360 (36%), and the consultant at 272 (27%).

The operative workload of the SHO included 122 endoscopic procedures (32%), with 98 (26%) operative procedures performed under local anaesthetic.

One hundred and fifty-eight (42%) of the junior surgeon's operative workload was in the major theatre suite and included cases of higher Intermediate Equivalent value (Table 1: representative sample).

Conclusion

We conclude that surgical training in a district hospital offers training commensurate with Royal College guidelines to junior surgeons in training.

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Table 1

PROCEDURE	CONSULTANT	REGISTRAR	SHO 1	SHO 2
Lap. Chole	19	32	1	1
Hartmanns resection	2			
Right Hemicolectomy	5	8	1	1
Small Bowel Resection	4	6	1	1
Incisional Hernia	1	2	1	1
Mayo Repair	1		3	4
Gastrojejunostomy			1	1
Varicose Veins	8	5	2	1
Inguinal Hernia	16	16	26	18
Appendectomy	4	15	9	7
Orchidopexy		1	8	2

62 Discharge letters - pay attention to the small print!

The Hospital Inpatient Enquiry (HIPE) system utilises a series of diagnosis related groups (DRGs) to indicate the casemix workload and complexity in a hospital. These DRGs are used to calculate the funding allocated to institutions nationwide. This coding is based on the discharge summaries completed in the surgical unit.

Aims

To assess whether the coding assigned reflects the casemix severity of individual cases and whether such coding errors have financial implications.

Methods

Two clinicians who had been instructed in the calculation of the coding allocation blindly reviewed cases in two common elective surgical admissions, open inguinal hernia repair and

colorectal cancer resection. Both independently allocated a code to each case. These blinded coding were then compared to the official coding allocated by the HIPE Dept.

Results

In both the inguinal hernia repair group (n=150) and the colorectal cancer resection group (n=150), 7% of charts were upgraded to a more complex casemix coding. Failure to list all secondary diagnoses in the discharge summary was the main cause for the initial lower coding.

Conclusion

Inadequate completion of discharge summaries can lead to lower casemix coding of cases which will have adverse financial implications for the institution. Regular auditing of discharge summaries can help to identify common mistakes and optimise the coding of a unit's casemix and help maximise funding.

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63 Predictors of acute renal failure in patients with normal pre-operative renal function

Aims

Renal complications following cardiac surgery are associated with very high morbidity and mortality and are most commonly seen in patients with pre-existing renal dysfunction. However limited literature is available on patients who develop acute renal failure who have normal pre-operative renal function, the objective of this study was to identify potential predictors for this complication.

Methods

One thousand, eight hundred and eighty consecutive patients with normal preoperative creatinine levels, who underwent cardiac surgery from a December 2002 to December 2004, were included in this study. Data was acquired from

computerised patient information system and the hospital notes. Forty patients developed significant renal dysfunction requiring renal replacement therapy (RRT) and were compared with the total population.

Results

See Table 1 overleaf.

Conclusion

This study has identified that older female patients with compromised LV function; a high euroscore and prolonged CPB time are at a higher risk of developing renal impairment post operatively. More over, this group of patients have a significantly higher mortality rate.

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Table 1

	TOTAL POPULATION	RENAL DYSFUNCTION	P VALUE
Number	1808	40	
Age	63.7+/-10.7	68.2+/-11.3	0.02*
Female	27.4%	50%	
Hypertension	52.8%	52.5%	
Diabetes	17.4%	15%	
Euroscore	4.2+/-3.1	7.43+/-3.4	<0.001*
Ejection Fraction(<50%)	37%	52%	
Cardiopulmonary bypass time(Min)	97.59+/-49.1	132+/-76.7	0.005*
X-Clamp time(Minutes)	58.69+/-27.8	74.89+/-45.9	0.03*
Mortality	1.89%	62.5%	

64 HMGB1 targeted immunotherapy provides unique protection against the local and systemic effects of acute pancreatitis

Aims

HMGB1 is a novel pro-inflammatory cytokine that contributes to sepsis associated lethality. Therapies directed against HMGB1, even when delayed, improve outcome in experimental sepsis. We have recently demonstrated that HMGB1 is elevated for up to three days after the induction of experimental pancreatitis we hypothesized that HMGB1 targeted therapy would improve outcome in acute pancreatitis.

Methods

Pancreatitis was induced using intraperitoneal (IP) L-Arginine at a dose of 500mg/100g body weight, in adult male sprague dawley rats (n = 30). The animals were divided into 3 groups; Control - treatment with normal saline IP (n = 10), Treatment 1 - treatment with Ethyl Pyruvate IP 100mg/kg (n = 10) and Treatment 2 - 24hr delayed treatment with Ethyl Pyruvate IP 100mg/kg (n = 10). All animals were sacrificed at 72hrs. Pancreas

and serum were analysed for HMGB1 expression. Histological specimens of pancreas and lung were assessed as well as broncho-alveolar lavage protein content.

Results

There was a 50% reduction in HMGB1 in the pancreas and serum of the treated groups. Reduced HMGB1 expression correlated with improved pancreatic histological scoring as well as improved bronchoalveolar lavage protein concentration. These beneficial effects were maintained even when the commencement of therapy was delayed for 24 hours.

Conclusions

These results show for the first time the unique potential of HMGB1 directed therapy in the treatment of pancreatitis. Its delayed temporal kinetics make it an unprecedented target of anti-inflammatory therapeutics.

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65 Vascular audit using the possum scoring tool: implementation in a teaching hospital

Audit is an essential part of good surgical practice. Frequently, however, morbidity and mortality figures may be misleading, as they do not take into account case-mix differences.

POSSUM (Physiological and Operative Severity Score for enUmeration of Morbidity and Mortality) is a validated audit tool which enables risk adjustment. We proposed that POSSUM would enhance our monthly audit and be easily implemented in our daily practice. One hundred patients were scored for the purpose of this

research using the POSSUM scoring tool. Patients were divided into three groups, based on predicted morbidity using POSSUM, group one 0-10% morbidity, group two 11-50%, and group three 51-100%. The observed morbidity and mortality were compared to predicted morbidity and mortality in the three groups. In all groups, the predicted morbidity and mortality were closely related to observed morbidity and mortality.

POSSUM was implemented in daily practice and predicted results matched observed, demonstrating that POSSUM is a practical tool for enhancing surgical audit.

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66 Back to the future - A wireless, real-time patient information system at the bedside

Technology has permeated nearly every aspect of healthcare delivery from radiology and the operating theatre to the processing and maintenance of vast quantities of patient data.

Yet despite this, the working ward round which relies heavily for effective decision making on the availability of accurate, up-to-date patient data (laboratory, radiological etc) has been virtually untouched. To date, the predominant reason for this has been technological. However, the advent of wireless networking has opened up a wide range of new possibilities.

In collaboration with a systems development company, we have developed a wireless, portable 'Tablet PC' based system which serves as the primary source of real time patient data on ward rounds. Patient Order Communications are also placed in real time together with patient discharge summaries for issue to GPs. The system also incorporates a Clinical Audit Module which effectively automates the production of monthly audit and service activity reports. Because the Tablet PCs are highly portable (900g) and the system fast and very user friendly, we believe that it will lead more effective decision making on ward rounds together with very tangible benefits in terms of work practices and cost savings.

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67 European working time directive (EWTD) – are we getting better? The trainers' perspective

Background & Objectives

Of late, much has been focussed on the implications of EWTD. We conducted a study to assess the views of consultants in two hospitals from neighbouring deaneries on its impact since being implemented in August 2004.

Methods

Opinions of consultants from clinical specialities were gathered on potential implications of EWTD on training aspects, patient care, and their social and academic life.

Results

Sixty-four consultants responded. Majority felt that the training during routine hours (82%) and out-of-hours (62%) is seriously affected. Almost all the consultants felt that continuity of patient care

and teamwork has been gravely affected. Most of the trainers (90%) felt that the increase in the number of junior doctors has resulted in dilution of training prospects. However, consultants from critical care and A&E feel that the current system suits their trainees in view of their intense workload. Interestingly, more physicians compared to surgeons felt that academic and social life have been affected.

Conclusions

The general consensus is that health care delivery and training have been adversely affected in the new system. Working pattern needs to be tailored according to the needs of speciality and the workload density within a hospital to improve quality of patient care.

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68 Handing over of surgical patients

Aims

There is no standard way of handing over surgical patients. Errors happen due to wrong or insufficient information. Can a Computer help in the handing over of surgical patients? Is there a better method of having team lists?

Methods

Using Windows Access, a database programme was created to allow each surgical firm to put in patient details such as demographics, diagnosis, plan of management etc. A report could then be obtained with the above data - for example Team based patient list or Ward based patient list.

Data was entered by House Officers. Day to day changes can be made. We surveyed both before and after this system was used.

Results

A 10-question survey done before starting this system of handover revealed that there was a lack of standardized form of handing over surgical patients. Survey done after implementation of this system revealed that this was an easy to use method, made ward rounds efficient, keeping track of patients was easy.

Conclusions

We have found this novel method to be very helpful because...

1. Does not require anything more than basic computer skills (user friendly).
2. The program is there to use with all computers at no extra cost
3. The list is in the order in which the ward round progresses
4. There is the potential to use such a database for auditing purposes.
5. Enables to keep track of all the patients, thus being an efficient method of 'handing over'.

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Session 9: Urology Session

69 Hypoxia induced proteins, a potential mechanism for preconditioning in solid organ transplantation

Background

Ischaemia reperfusion and immunosuppressant drugs induce damage to kidneys during transplantation. This contributes to delayed graft function (DGF) and eventual graft failure. Protecting against this damage has clinical implications to the survival of transplanted organs. Our objective was to determine that non-lethal periods of hypoxia confer protection against these injuries.

Methods

Human proximal tubular cells (HK-2) were incubated under normoxic or hypoxic conditions for 24 hours and then placed at 4°C for 6 hours before they were returned to 37°C with Cyclosporine A (CSA) to mimic the in vivo situation. Cell viability and apoptosis were measured by PI staining and flow cytometry. Genechip and western blotting analysis of HK-2 cells cultured in hypoxia

for different times were carried out to identify upregulated proteins that induce this response.

Results

Varying periods of hypoxia preconditioning produced no change in cell viability and apoptosis compared to cells in normoxia. Pre-exposure of cells to hypoxia significantly ($p < 0.05$) protected against CSA across a variety of environments. The anti-apoptotic protein, BNIP-1 was up regulated across the hypoxic time points.

Conclusion

Exposure of HK-2 cells to reperfusion and immunosuppressant drugs predispose them to injury and death. Preconditioning kidneys to cause up regulation of hypoxic induced protective proteins at harvesting, could reduce this injury and DGF resulting in prolonged the life-expectancy of the transplanted organ.

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Table 1

	Normoxia ouM	Hypoxia ouM	Normoxia 8ouM	Hypoxia 8ouM
24h	12.1±2.3	13.4±3.5	40.5±4.3*	33.4±3.2#

* $p < 0.05$ vs Normoxia ouM, # $p < 0.05$ vs Normoxia 8ouM

70 Transrectal prostate biopsy - does a role exist for neurovascular bundle local anaesthesia?

Aims

Transrectal Ultrasound (TRUS)-Guided Prostate Biopsy has revolutionized the investigation of patients with elevated serum Prostate Specific Antigen (PSA) levels, and those with abnormal Digital Rectal Examinations. Though administration of local anaesthetic to the vicinity of the neurovascular bundle prior to TRUS has been evaluated during several studies, techniques vary greatly. Some operators prefer the use of local anaesthesia while others doubt it improves patient tolerance. Our aim was to evaluate the

efficacy of neurovascular bundle local anaesthesia (LA) infiltration in decreasing the discomfort experienced by patients undergoing TRUS-guided biopsy of prostate gland

Methods & Materials

Patients were randomised into groups administered either 2.5ml of 1%, 5ml of 1% lignocaine as local anaesthesia, or none at all. Following usual protocols, sextant TRUS-guided prostate biopsies were obtained by one of two consultant radiologists. Patients rated subjective

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pain along a visual analogue scale as follows:

- At the time of endorectal probe insertion
- Following each of the sextant biopsies
- At the time of completion of the procedure

Furthermore, patients were telephoned at seven days post-procedure and questioned regarding adverse events. A further set of pain score estimations was recorded, taking into consideration overall discomfort, to include that experienced in the post-biopsy period.

Results

Three hundred patients were enrolled, 100 to each group. Mean pain scores were significantly reduced ($p < 0.05$) in the group receiving 5ml 1% lignocaine, at all gland biopsy sites.

Conclusion

Administration of 5mL 1% lignocaine to the neurovascular bundle bilaterally prior to TRUS-guided prostate biopsy significantly reduced mean visual analogue scores during, immediately following, and one week following this procedure.

71 Day case prostate vaporization using high-powered KPT laser

Aims

High-power photoselective potassium titanyl phosphate (KTP) lasers have the potential to revolutionise the surgical management of benign prostatic enlargement (BPE), in theory allowing day case surgery with minimal intraoperative blood loss and postoperative catheterisation for less than 24 hours. We set out to evaluate the safety and efficacy of day case KTP laser prostate vaporization.

Methods

Data on pre and postoperative uroflowmetry, post-void residual volume, and international prostate symptom score (IPSS) were prospectively recorded along with prostate volume, duration of vaporisation, energy consumption and duration of stay.

Results

Data on 117 patients were analysed. The mean (median) prostate volume was 59 (54) cm — three

with a mean vaporisation time of 28 (26) minutes and energy consumption of 90096 (78871) Joules. Fewer than 25% of patients required admission, most having had surgery in the afternoon.

No postoperative transfusions were required. There were statistically significant increases in maximum urinary flow rate from 10.25 mL/s preoperatively to 24.27, 25.13 and 23.22 mL/s at six weeks and three and six months postoperatively as well as significant improvements in average urinary flow rate, post-void residual urine volume and IPSS. No differences between energy consumption or lasing time for the first and last 20 cases were detected.

Conclusions

KTP laser vaporization of the prostate is possible as a day case in most patients and is safe and effective. The learning curve is short for urologists experienced in TURP.

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72 Can a decreasing psa be used to avoid prostate biopsy?

Aims

High-power photoselective potassium titanyl phosphate (KTP) lasers have the potential to revolutionise the surgical management of benign prostatic enlargement (BPE), in theory allowing day case surgery with minimal intraoperative blood loss and postoperative catheterisation for less than 24 hours. We set out to evaluate the safety and

efficacy of day case KTP laser prostate vaporization.

Methods

Data on pre and postoperative uroflowmetry, post-void residual volume, and international prostate symptom score (IPSS) were prospectively recorded along with prostate volume, duration of vaporisation, energy consumption and duration of stay.

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Results

Data on 117 patients were analysed. The mean (median) prostate volume was 59 (54) cm — three with a mean vaporisation time of 28 (26) minutes and energy consumption of 90096 (78871) Joules. Fewer than 25% of patients required admission, most having had surgery in the afternoon. No postoperative transfusions were required. There were statistically significant increases in maximum urinary flow rate from 10.25 mL/s preoperatively to 24.27, 25.13 and 23.22 mL/s at six weeks and three and six months postoperatively

as well as significant improvements in average urinary flow rate, post-void residual urine volume and IPSS. No differences between energy consumption or lasing time for the first and last 20 cases were detected.

Conclusions

KTP laser vaporization of the prostate is possible as a day case in most patients and is safe and effective. The learning curve is short for urologists experienced in TURP.

Table 1

PSA PATTERN	BENIGN CASES (%)	CANCER CASES (%)	PROPORTION WITH CANCER (%)
1	43(21.7)	13(22.8)	13/56(23.2)
2	37(18.7)	20(35.1)	20/57(35.1)
3	62(31.3)	10(17.5)	10/72(13.9)
4	56(28.3)	14 24.6)	14/70(20)

73 The consent concept

Aim

To determine the level of knowledge of patients undergoing transurethral resection of prostate (TURP) on admission and ability to retain consent information post-operatively.

Methods

Thirty-two male patients were considered to study their level of understanding of the procedure. Each patient received a questionnaire testing knowledge of their condition, the procedure and post-operative course. Randomisation to receive a standardised verbal consent alone or to the verbal consent with the addition of a typed booklet detailing the same information was preformed. Patients were retested on the day of their discharge.

Results

Twenty-eight of men were eligible. The age range was 60-85 years, (mean 73.2). Preoperatively the mean score over both groups was 51.9% with

a range of 38.4%-73%. Eleven patients were randomised to verbal consent alone and the mean pre-op score was 48.9% however this improved to 60.4% post-operatively a net improvement in score of 11.5%. In the group randomised to receive the information booklet the mean pre-op score was 50.9% with an improvement in score post-operatively of 17.4%.

Conclusions

In this mostly elderly cohort of patients, pre-operative knowledge of the procedure is poor; however significant improvements can be obtained with a standard verbal consent especially when augmented with written information. Analysis revealed lower patient age correlated well with high pre-operative score, but did not necessarily relate with the percentage change in score in either group. The greatest improvements in score occurred in those patients who received a written information sheet in addition to verbal consent alone.

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74 Apoptosis, proliferation and transdifferentiation in HK-2 cells during protein overload and hypoxia: effect of Angiotensin II treatment

Renal fibrosis is associated with apoptosis, proliferation and transdifferentiation. Angiotensin II (Ang II) has been proposed to mediate apoptosis, changes in cell cycle distribution and fibrosis.

We hypothesised that in HK-2 cells, external stresses associated with renal disease, would alter apoptosis, proliferation and transdifferentiation which could be further regulated by the addition of Ang II.

Methods

HK-2 cells were cultured in proteinuric conditions (BSA 30mg/ml) or hypoxic conditions (1% O₂) followed by treatment with or without Ang II (0.1µM-10µM).

Percentage apoptosis and proliferation were assessed by propidium iodide DNA staining using flow cytometry. E-cadherin protein expression was examined by Western blotting to determine changes in transdifferentiation.

Results

Protein overload induced a significant increase in apoptosis (7.58±/-3.16 vs 3.77±/-1.18) (p<0.001) and decrease in proliferation (12.07±/-1.6 vs 16.95±/-3.3) (p=0.001) which was unaffected by Ang II co-culture. Neither hypoxia nor hypoxia-reoxygenation affected apoptosis or viability, in the presence or absence of Ang II. Hypoxia significantly decreased proliferation (21.83±/-0.99 vs 16.33±/-0.75) (p= 0.01).

Protein overload and hypoxia (+/-reoxygenation) reduced E-cadherin expression which was accentuated by Ang II during hypoxia.

Conclusion

Ang II does not affect HK-2 cell apoptosis or proliferation under normal or stressed conditions. Ang II treatment did accentuate E-cadherin loss during hypoxia. In vitro renal stresses cause characteristic changes in HK-2 cell transdifferentiation as opposed to cell death. Renal stresses induce differential effects on apoptosis and transdifferentiation leading to fibrosis. This study supports the use of Angiotensin converting enzyme inhibitors or receptor blockers to block AngII induced transdifferentiation and thus fibrosis.

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75 Prostate cancer: presentation, diagnosis and management of prostate cancer in a peripheral hospital – a twelve month analysis

Objective

Patients diagnosed with prostate cancer in Letterkenny General Hospital during the 12 month period from January 2003 to December 2003 were studied. Patient presentation (source of referral, indication for referral), diagnostic methods and treatment options (after informed counselling) requested by patients were studied. The stage of cancer at presentation, the treatment modalities undertaken and the initial outcome is presented.

Method

A retrospective analysis of all prostate cancer patients diagnosed during 2003 was performed. Patients presented to the Urology Assessment clinic (raised PSA, lower urinary tract symptoms (LUTS), or were referred from their general practitioners with raised PSA (asymptomatic) or low urinary tract symptoms or were referred from other services in the hospital. All patients with raised PSA underwent flexible cystoscopy

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and digital rectal examination (DRE) and urinary cultures. Patients with palpable prostatic nodules underwent blind biopsy. Patients with elevated PSA in the absence of infection where no nodule was palpable were referred for TRUS biopsy. Diagnosis was made on the basis of positive histology and tumours were Gleason scored and graded.

Results:

Between January 2003 and December 2003, 64 prostate cancers were diagnosed in Letterkenny General Hospital. There were six positive trus biopsies, 47 Letterkenny prostatic biopsies and 11 diagnosed by TURP. Of the patients that were referred to us, 35 were treated with androgen blockade therapy, seven underwent surveillance watchful waiting, one underwent radiation therapy alone, 26 underwent radiation coupled with hormonal therapy, one patient undergoing radical prostatectomy. Patients were staged by CT, Bone Scans and MRI when advised by the radiology dept. One patient presented less than 50 years of age, four presented between 50 – 59, 22

presented between 60 – 69, 32 presented between 70 – 79, eight presented between 80 – 89 and three presented over 90 years-of-age. Of those that presented eight presented with a Gleason score of four, 13 with a Gleason score of five, 24 with a Gleason score of six, 16 with a Gleason score of seven, one with a Gleason score of eight and one with a Gleason score of nine.

Conclusions:

Patients with prostate cancer usually present with an elevated PSA or low urinary tract infections. The age profile was between 48 and 84 with a median in the 70 – 79 age group. 26.5% presented with locally advanced metastatic disease. 68.625% presented with disease confined to the prostate gland but even those did not opt for radical surgery. The follow up over 12 months show 82.5% remission with a return to normal of their OSA. Two died as a direct result of prostate cancer. Treatment of prostate cancer improves the quality of life by decreasing their symptoms in addition to prolonging their survival.

76 The role of hand held doppler in acute scrotal pain

Aim

Testicular pain represents a troublesome clinical entity whose diagnostic evaluation and effective treatment is a challenge for the surgeon. The aim of this study is to assess the role of Hand Held Doppler in determining the testicular blood flow.

Methodology

Twenty-two successive patients with scrotal pain who presented to the A&E Dept between October 2003 and June 2004, had hand held doppler (HHD) examination of their testicular arteries. Data collected about the pain, swelling, tenderness, HHD, ultrasound studies and exploratory findings.

Results

All the patients had HHD examination. Fifteen patients had positive testicular artery signals while seven patients had no signals. All seven were explored and confirmed the diagnosis of testicular torsion. Of the 15 cases with positive signals, three were explored, as these patients had a very

strong clinical suspicion of testicular torsion but on exploration no torsion was found. The HHD & clinical examination was repeated at four-hourly for 12 hours. The remaining 12 cases with positive HHD signals had a planned testicular ultrasound which confirmed the diagnosis of inflammatory disease. All these patients were subsequently reviewed by the urologist.

Conclusion

Our study reveals that the HHD examination is an easy and reliable tool for assessing the testicular blood flow in the emergency department. Prompt surgical exploration is recommended if there is any uncertainty about the diagnosis. We recommend a multi-centre study to be carried out to establish the role of HHD examination in the acute scrotal pain.

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Session 10: Plenary Session

77 Oral immune tolerance to foregut cancers may be surmounted by immunogenetherapy

Aim

To investigate if the potent local and systemic, tumour-specific, anti-tumour immune responses evoked by immunogenetherapy with plasmid coding for Granulocyte Macrophage-Colony Stimulating Factor (GM-CSF) and the B7-1 costimulatory molecule, delivered by electroporation into growing cancers, overcome the effect of oral immune tolerance.

Oral administration of tumour antigens to mice induces antigen-specific systemic immune tolerance, conferring a growth advantage specific to individual cancers (1).

Methods

Balb/c mice bearing growing JBS tumours ($\leq 100\text{mm}^3$) were administered the GM-CSF/B7-1 gene construct by intratumoural injection and electroporation. Animals thus cured were administered tumour antigen by daily gavage feeding with 40mg of homogenised JBS tumour or were fed an alternative tumour (C26) or PBS alone. These animals, with controls, were rechallenged

by subcutaneous inoculation with a tumourigenic JBS dose. Responses were determined by tumour growth curves and adoptive transfer of lymphocytes.

Results

Complete tumour regression occurred in 54/90 mice (60%) following electroporation-immunogenetherapy. JBS tumours appeared earlier and grew faster in naïve animals fed JBS than in those fed PBS ($p < 0.005$, Day 8). Irrespective of feeding, no tumours developed in cured animals upon rechallenge (0/17, 0%) compared with naïve controls (23/23, 100%). Splenocytes from cured mice subsequently fed JBS conferred a partially attenuated immunity on adoptive transfer.

Conclusions

The immune tolerizing effect of tumour-specific antigens shed into and processed by the gut immune system may in part explain the poorer prognosis of human oesophagogastric malignancy. Immunogenetherapy of foregut cancers may surmount this effect and contribute to improved prognosis.

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78 A comparison of open (OR) and endovascular abdominal aortic aneurysm repair (EVAR) with best medical treatment (BMT). Has the availability of evar expanded our indications for intervention, and improved survival?

Aim of our study is to investigate whether EVAR has prolonged life expectancy in high-risk patients with AAA.

From 2002- 2005, 780 patients with AAA were referred. 115 patients were deemed high-risk according to ASA classification and were prospectively assigned to OR (n=33), EVAR (n=37) or BMT (n=45). Adjustments were made for case severity mix and patients stratified using SVS/AAVS co-morbidity and anatomic factor severity

scores. All patients had CT Angiography. Groups were matched for aneurysmal site, size, clinicopathological manifestations and gender.

Patients in BMT were significantly older than in the other two groups ($p < 0.01$), but there was no statistical difference in co-morbidity severity scores between groups ($p > 0.05$). Comparing EVAR with OR, there was no significant difference in primary technical and clinical success rates ($p > 0.05$), but length of hospital stay and 30-day morbidity were significantly reduced in EVAR ($p = 0.0004$, $p < 0.01$).

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79 Investigation of progesterone receptor B, (PRB), and growth arrest-specific gene 6, (Gas6), in breast cancer

Progesterone, implicated in breast cancer development, acts through two progesterone receptors PRA and PRB. PRB can be silenced by promoter hypermethylation. PRB upregulates a number of genes involved in breast cancer mitogenesis including growth arrest-specific gene 6 (Gas6), which codes for the ligand of the Axl tyrosine-kinase receptor. Overexpression of Gas6 has thought to result in increased tumour invasiveness and proliferation 1.

Aims

Our aims were firstly to evaluate the epigenetic regulation of PRB in 100 primary breast tumours, and to determine the correlation with PRB mRNA and PRB protein expression. Secondly, to look at Gas6 in this cohort of tumours, to examine the relationship of PRB/Gas6 to a number of clinical variables and outcome.

Methods

Following DNA and RNA extraction from 100 breast carcinomas, we assessed the methylation

status of PRB using sodium bisulphite modification and methylation sensitive PCR. Using a real time quantitative PCR analysis we calculated the levels of PRB and Gas6 mRNA expressed in these tumours. We evaluated protein expression immunohistochemically with a commercially available PRB specific antibody.

Results

Seventy-seven per cent of samples in the cohort displayed promoter hypermethylation. There was a positive correlation between PRB promoter methylation and reduced PRB mRNA levels ($p = 0.069$) and between lower levels of PRB protein ($p = 0.008$). Gas6 expression correlated inversely with NPI ($p = 0.018$, $r = -0.327$), with tumour grade ($p = 0.069$), with mitotic count ($p = 0.068$) and with ER Beta immunohistochemistry ($p = 0.051$).

Conclusion

In this cohort PRB expression has been affected by transcriptional silencing. Regarding Gas6 levels, a high level of Gas6 was associated with favourable prognostic markers rather than tumour proliferation.

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80 Novel titanocene anti-cancer drugs and their effects on apoptosis in androgen independent prostate cancer cells

Aims

Treatment of androgen independent prostate cancer (AIPC) is limited by the lack of effective chemotherapeutic agents. The objective of this study was to investigate the effects of novel titanocene analogues on AIPC and to compare these agents to other transitional metal anticancer drugs titanocene dichloride (Cp 2TiCl 2) and cisplatin.

Methods

AIPC cells PC-3 and DU-145 were cultured to confluence and treated with two novel titanocene compounds, thiophenyl ansa-titanium dichloride (B) and heteroaryl titanocene dichloride (Y) and compared to Cp 2TiCl 2 and cisplatin. Cell number was assessed using the crystal violet uptake assay. Percent apoptosis and viability was assessed using propidium iodide and flow cytometry. Cytochrome C release was assessed using western blotting. Caspase 3 activity was assessed using the caspase inhibitor ZVAD-FMK.

Results

These novel titanocene agents cause a significant reduction in cell number compared to Cp 2TiCl 2 that is comparable to that of cisplatin. This effect was not due to inhibition of cell cycle but a specific apoptotic effect with less necrosis when compared to cisplatin. Cytochrome C was released from the mitochondria but inhibition of caspase activity by the pancaspase inhibitor ZVAD-FMK did not block apoptosis.

Conclusion

These compounds induce their effects through apoptosis unlike cisplatin which induces a more necrotic effect. Apoptosis was mitochondrial mediated but caspase independent. These compounds represent new and exciting death inducing agents via a novel mechanism which tumour cells may not be able to overcome thus adding to the armory of treatments for advanced prostate cancer.

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81 Associations and interactions between the co-regulatory protein SRC-1 and Ets-2 in breast cancer

Aims

In breast cancer associations between p160 co-activator proteins and the development of resistance to endocrine treatment have been shown. We hypothesized that nuclear co-regulatory proteins may interact with non-steroid receptors.

Methods

We examined the MAPK activated transcription factors, Ets, as possible interaction proteins of the co-activator SRC-1 in human breast cancer. Silencing of SRC-1 was used to inhibit estrogen induced growth of breast cancer cells in vitro. Interactions between SRC-1 and Ets-2 were assessed using co-immunoprecipitation. Expression and co-expression of Ets and the co-regulatory protein SRC-1 was investigated using immunohistochemistry and immunofluorescence in a cohort of breast tumour patients (n=132).

Results

It was found that Ets-2 interacted with SRC-1 under basal conditions and that the addition of growth

factors further increased the level of interaction. Recruitment of SRC-1 to the Ets response element was demonstrated in primary breast tumour cell cultures and in the SKBR3 cell line using electromobility shift assay. Growth factors induced interaction between Ets2 and the DNA response element and stimulated recruitment of co-activators to the transcription factor-DNA complex. Silencing of SRC-1 was found to down-regulate expression of the Ets target gene, c-myc. Ets-2 was found to be associated with reduced disease-free survival (p<0.0001), as was expression of SRC-1 (p<0.0001). Co-expression of Ets-2 and SRC-1 significantly reduced the period of disease-free survival (p<0.0001).

Conclusions

These data describing associations and interactions between non-steroid transcription factors and co-regulatory proteins may provide the basis for a new model of co-activator mediated endocrine resistance in breast cancer.

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82 Initial psa levels and the long term risk of prostate cancer

Aim

To assess the relationship between initial PSA levels and the long-term risk of being diagnosed with prostate cancer in a population based cohort study in Northern Ireland (NI).

Methods

The NICR maintains an electronic register of PSA tests performed in NI, which is linked to NICR database of incident cancers occurring within the region. This study includes all men who had their first PSA between 1994 and 1998. These were followed up for death and diagnosis of cancer until 2003. The absolute risk of cancer based on the level of first PSA was calculated by age group, as were relative risks within age groups.

Results

68364 men were included, with 2831(4.1%) diagnosed with cancer over the observation period. Mean follow-up was 6.05 years (max 9.96 years). Within age groups, the absolute and relative risk of cancer increased incrementally with PSA level (see Table). At any age, PSA <2 was associated with low risk of cancer (<2/1000/yr).

Conclusions

The risk of developing prostate cancer correlates with increasing PSA, even at low levels. The upper normal PSA range shows a markedly increased relative risk compared to the lower range.

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Table 1—
RISK OF CANCER/1000 PERSON YRS FOLLOW-UP (RELATIVE RISK*)

PSA LEVEL	AGE<50	50 - 59	60 - 69	≥ 70
0 - 0.99	0.03 (1.0)	0.23 (1.0)	0.44 (1.0)	1.23 (1.0)
1 - 1.99	0.13 (4.7)	0.73 (3.2)	1.21 (2.7)	1.92 (1.6)
2 - 2.99	0.69 (24.4)	1.52 (6.6)	2.46 (5.6)	2.34 (1.9)
3 - 3.99	3.93 (139.6)	3.59 (15.7)	5.49 (12.5)	3.63 (3.0)
4 - 9.99	4.38 (155.8)	9.72 (42.4)	11.2 (25.4)	8.24 (6.7)
≥ 10	9.48 (337.1)	45.1 (196.5)	54.8 (124.6)	66.5 (54.1)
No. cancers	23	250	816	1733
No. patients	8323	13924	19091	26274

*0-0.99 as reference category

83 Taurolidine inhibits colorectal adenocarcinoma metastases in vivo and in vitro by inducing apoptosis

Taurolidine, an antimicrobial agent, has proven antineoplastic properties with the advantage of a lack of systemic toxicity. 5-Fluorouracil, the current mainstay of colorectal cancer chemotherapy, can be severely toxic. We hypothesised that Taurolidine reduces colorectal adenocarcinoma growth in vivo and in vitro.

Methods

Liver metastases were induced in adult Balb/C mice (n=20) by inoculating each mouse with 2x10⁵ CT26 (murine colorectal adenocarcinoma) cells by intrasplenic injection. The animals were subsequently divided into 4 groups- Group 1 received PBS as control, Group 2 received PVP (250mg/kg IP), as solvent control, Group 3 received Taurolidine (100mg/kg IP) and Group 4 received 5-Fluorouracil (25mg/kg IP) as positive control one week following tumour cell inoculation. Tumor burden was calculated by both counting liver surface nodules and

measuring the ratio of liver weight/body weight at 14 days. In vitro CT26 cells were incubated with culture medium, PVP (500micrograms/ml) and Taurolidine at concentrations of 5, 25, 50, 100, and 200micrograms/ml for 24hours. Apoptotic cells were detected by flow cytometry by assessing the percentage of propidium iodide stained hypodiploid cells.

Results

Our results show a similar benefit in taurolidine over PBS and PVP in reducing liver tumour burden, similarly, 5FU treatment also reduced tumour growth. In vitro data showed that taurolidine induced dose dependant apoptosis in CT26 cells which was most marked in the 200 microgram/ml group.

Conclusion

Taurolidine reduces colorectal cancer liver metastases in vivo by inducing apoptosis. Our results suggest that taurolidine should be considered an effective therapy for colorectal liver metastases.

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84 Downregulation of the HHIP gene in Intraductal Papillary Mucinous Neoplasms of the Pancreas

Aims

Hedgehog pathway overactivity has been implicated in the development of a variety of human cancers. The Human Hedgehog interacting protein gene, HHIP, binds hedgehog pathway ligands and is responsible for negatively regulating hedgehog pathway activity. IPMNs are intraductal mucin-producing cystic neoplasms of the pancreas with clear malignant potential. In this study we determine the expression of the human hedgehog interacting protein gene, HHIP, and investigate genetic and epigenetic mechanisms responsible for HHIP downregulation in IPMN's, correlating expression with methylation status of the HHIP gene in IPMN's harbouring carcinoma in-situ and invasive cancer.

Methods & Results

HHIP promoter methylation was identified in 3/12 (25%) IPMN's harbouring carcinoma in situ, 9/24 (38%) IPMN'S with invasive cancer, and 0/13 (0%) normal pancreata by methylation-specific PCR.

HHIP was downregulated in 21/36 (58%) IPMN's by RT-PCR and quantitative real-time PCR, 10/21 (47%) of which were aberrantly methylated at HHIP. Treatment with 5-AzadC, a methyltransferase inhibitor, restored expression of HHIP in methylated non-expressed tumours. Transfection of exogenously Hedgehog-inducible 8x Gli-luciferase reporter, a transcriptional target of hedgehog pathway activity resulted in increased pathway activity in methylated cell lines and pathway activity was inhibited by treatment with 5-AzadC.

Conclusions

The human hedgehog interacting protein gene, HHIP, is epigenetically inactivated by hypermethylation in IPMN'S harbouring carcinoma in-situ and invasive cancer and is a mediator of hedgehog pathway activity in IPMN tumours. Re-expression of HHIP using methyltransferase inhibitors and Hedgehog pathway blockade with cyclopamine represent potential therapeutic targets in Intraductal Papillary Neoplasms of the Pancreas.

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85 Hypertonic saline reduces post-operative peritoneal adhesion formation

The global inhibition of immune-competent cell interactions by hypertonic saline (HTS) may confer protection against formation of peritoneal adhesions following injury to the mesothelium at surgery.

The aim of the present study was to elucidate the effect of hypertonic wash on the development of adhesions in an animal model, a process characterised by collagen production in response to tumour necrosis factor (TNF) α and interleukin (IL)-6 release from macrophages.

Methods

Adhesions were induced in 24 male Sprague-Dawley rats by laparotomy with caecal abrasion and deposition of polypropylene suture. Animals were prospectively randomized to receive one of three agents: in eight rats, peritoneal toilet was performed at closure with 5ml of HTS (7.5% NaCl), while a further eight animals received 5ml of Hartman's solution, and eight rats received 5ml normal saline (NS). Re-laparotomy with quantification of adhesions using the Zuhlke

Scoring system was performed at day 14. Samples of peritoneal fluid and peritoneum were collected for assessment of pro-inflammatory cytokine levels (TNF- α , IL-6), angiogenesis, and angiogenic factors. In a separate experiment, fibroblast growth and restitution was estimated in vitro following scoring of a confluent plate in vitro with a sterile needle in the presence and absence of HTS.

Results

HTS infusion at abdominal closure significantly reduced peritoneal adhesion formation. Zuhlke scores were markedly attenuated in the HTS group (1.08 \pm 0.1) compared to the NS (3.84 \pm 0.7) and Hartman's (3.52 \pm 0.5) groups; P<0.04. Adhesiolysis was significantly easier in the HTS group than in the others (P=0.02). In addition, a significant reduction in peritoneal TNF- α and IL-6 levels was observed (P<0.05), while fibroblast growth and proliferation was significantly impaired by a hypertonic environment.

Conclusions

Peritoneal toilet with HTS attenuates adhesion formation. This may represent a novel therapeutic strategy.

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86 Combination of SELDI-TOF and data mining provides early stage response prediction for rectal tumours undergoing multimodal neoadjuvant therapy

Aims

This study investigated whether proteomic analysis of serum could be used to predict response of locally advanced rectal cancer to neoadjuvant radiochemotherapy (RCT).

Methods

Serum from 20 consecutive patients was studied pre-treatment, 24hrs, 48hrs, 1 week, 3 weeks, 5 weeks and pre-surgery. The response to treatment was measured by Mandard Tumour Regression Grade (TRG) based on the degree of residual tumour to fibrosis. All serum samples were analysed by SELDI-TOF mass spectrometry.

Results

In total, 230 spectra from 9 good responders (TRG 1+2) and 11 poor responders (TRG 3+4) were

generated. Using support vector classification analysis (SVM) an algorithm was generated that identified 14 key protein peaks of interest that segregated good and poor responders. Using this algorithm, predictive ability of individual samples from all time points was assessed. Whilst pre-treatment serum was unable to predict response, serum taken as early as 24 or 48 hrs into treatment was able to predict response with 87.5% sensitivity and 80% specificity.

Conclusions

These data indicate that analysis of low molecular weight serum proteins using SELDI-TOF may provide accurate and non-invasive response prediction to RCT at an early point in treatment. Further analysis will focus on purification of these proteins and testing in larger prospective studies.

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87 Thermotolerance-induced goblet cell activity confers protection in post-operative gut barrier dysfunction

There is evidence that some level of protection against adverse sequelae of surgery is provided by induction of thermotolerance.

Aims

The aims of this research is to examine the hypothesis that the gut-barrier dysfunction which results from ischaemia-reperfusion injury and bowel-handling is prevented or decreased by prior induction of thermotolerance and whether the protective effect of thermotolerance may be due to phenomena other than heat shock protein, whether goblet cells might play a more protective role.

Methods

Adult sprague-Dawley rats were randomized into thermotolerant (n=16) and control (n=16) groups; half of the animals in each group were subjected to bowel-handling and half to ischaemia-reperfusion. The responses of the thermotolerant and control animals were compared with respect to goblet cell type and number, oedema of the

bowel wall, TNF blood levels and histopathological changes of the bowel wall.

Results

The thermotolerant animals were found to have significantly less oedema and histological damage. There was significant increase in the number of goblet cell in response to surgical insults (19.16 +/- 5.66 vs. 4.855 +/- 3.15), and specifically a greater increase in acidic goblet cells (19.42 +/- 4.58) as compared with neutral ones (13.28 +/- 5.53) (p<0.0001).

Conclusions

Thermotolerant animals were not only able to recruit or produce more goblet cells to protect the gut surface, but the greater numbers of the goblet cells in the thermotolerant were of the mature acidic type thus capable of functioning in a protective capacity.

These findings provide evidence for thermotolerance-induced histological changes in the bowel wall providing a protective effect against adverse sequelae of surgery.

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88 Preconditioning modulation of leucocyte and endothelial activation in cardiac surgery: The role of an Omega-3 fatty acid infusion

Aims

Inappropriate systemic inflammatory leucocyte and endothelial activation mediates multiple organ dysfunction in cardiac surgery. We hypothesised that pretreatment with a clinically approved omega-3 fatty acid infusion would prevent this response in-vitro.

Methods

Endothelial cells were isolated from saphenous vein of 75 cardiac surgery patients and grown into monolayers, pretreated with a clinically relevant level of the omega-3 infusion, stimulated with LPS/TNFa/C5a, prime mediators of the perioperative systemic inflammatory response, and adhesion molecules, coagulant and pro-inflammatory cytokine responses

were assessed. Similar analysis was performed using isolated neutrophils. Endothelial protective mechanism was investigated by examining nuclear translocation of the inflammatory transcription factor NFkB and the heat-shock protein response.

Results

Pretreatment for only 4hours prevented upregulation of endothelial adhesion molecules necessary for neutrophil tissue invasion (Table 1), prevented the inflammatory procoagulant response through maintenance of endothelial surface thrombomodulin (49.9 +/- 0.3 mean channel fluorescence in control vs 64.9 +/- 4.9 omega-3, P<0.01), and markedly attenuated endothelial pro-inflammatory cytokine release.

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Table 1 —

RISK OF CANCER/1000 PERSON YRS FOLLOW-UP (RELATIVE RISK*)

MEAN CHANNEL FLUORESCENCE UNITS	BASELINE	LPS-STIMULATED	PRETREATED LPS-STIMULATED	P-VALUE
ICAM-1	86 +/- 12	196 +/- 1	72 +/- 0.4	<0.01
E-SELECTIN	17 +/- 0.2	109 +/- 2	13 +/- 0.4	<0.01
IL-6	50 +/- 5	2727 +/- 23	211 +/- 8	<0.01
IL-8	26 +/- 16	3678 +/- 10	2650 +/- 36	<0.01

Prolonged neutrophil survival during inflammation was partially reversed through an increase in apoptotic rate with pretreatment (% of neutrophils apoptotic in controls 73 +/- 1% vs omega-3 pretreated 77 +/- 1%, P=0.03). Pretreatment upregulated HSP72 levels which was associated with reduced nuclear translocation of activated NFkB in response to LPS stimulation (Nuclear p50 levels of 2.1 +/- 0.2 x 100,000 RLU in controls vs

1.3 +/- 0.2 x 100,000 RLU in pretreated endothelium, P<0.01) suggesting preconditioning protection against inflammatory activation.

Conclusions

Clinically acceptable preconditioning using an omega-3 infusion prevents the pathogenesis associated with organ dysfunction following cardiac surgery.

Session 11: Plastics/Minimally Invasive Session

89 A cluster of Clostridium Difficile Associated Diarrhoea on an Orthopaedic ward can lead to high morbidity and mortality. A retrospective audit and review

Aims

To determine causative factors why Clostridium Difficile associated diarrhoea (CDAD) causes significant mortality in Orthopaedic patients.

Methods

A retrospective review and audit. POSSUM score to qualify morbidity.

Results

One year audit: in a four-month period a cluster of seven patients on our Orthopaedic ward contracted (CDAD) and mortality was 43%. The pathogenesis can be attributed to a triad of factors.

First is host susceptibility which now appears to be the critical factor for the development of CDAD because asymptomatic colonization is the most common outcome after exposure. The hosts' immune systems ability to produce protective antibodies against the toxins of C. Difficile plays an important role in reducing the severity of the disease and preventing further recurrences.

Second is exposure to antibiotic use which can disrupt the protective microflora in the gut.

Third is exposure to C. Difficile where asymptomatic carriers and symptomatic hospital patients shed C. Difficile cells and resistant spores into the hospital environment. Cluster outbreaks occur through patient to patient contact usually by hand transmission. The triad of factors is often fulfilled in Orthopaedic patients who routinely have prophylactic antibiotics. They are frequently patients with high co-morbidity and high POSSUM scores because they need emergency surgery after trauma.

Lastly hospital infectious control protocols and medical staff hygiene is important regarding transmission.

Conclusions

Orthopaedic patients are particularly susceptible to the triad of factors and have a high risk of mortality. Extreme vigilance must be taken with their care as the guise of simple diarrhoea may be misleading.

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90 Upper dorsal endoscopic thoracic sympathectomy: a comparison of one and two port ablation technique in 180 cases

Aims

Endoscopic thoracic sympathectomy (ETS) is the gold standard treatment for facial blushing and hyperhidrosis. Our aim was to analyze and compare the outcomes in patients treated using a one and more standard two port method.

Methods

We examined the results of 180 consecutive ETS performed on 96 patients (M:F, 30:66) with respect to operative method, symptom control, patient satisfaction and complications. Follow up was available on 144 treated sides in 77 patients (80.2% return rate), 38 treated with two ports, 39 performed by a one port procedure. Mean age was 32.6 years (18-63) with a median follow up of 25 months (5-85).

Results

There was no correlation between number of ports and patient satisfaction. Hospital stay was shorter

in the one port group (1.51 nights) compared to the 2 port group (1.79 nights). Median satisfaction rating out of 5 was 3.3 with 59 patients (76.6%) rating the overall outcome as three or more. 90.9% had an improvement in symptoms, although 21 patients (27.3%) described a late return of symptoms. 11.7% had a post-operative pneumothorax, of which 2 (1.3%) necessitated intercostal drainage.

Conclusion

There was no significant difference between the outcomes of the one and two port groups. ETS can be safely and effectively carried out using a single port method with similar results to the traditional two port procedure. Despite high rates of reflex sweating, the majority of patients are very satisfied with the results.

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91 Suitability of laparoscopic nissen fundoplication to the day-care setting

Aims

Minimally invasive surgery has significantly facilitated the expansion of day care surgery. This study was to evaluate safety, patient acceptability and outcome of laparoscopic Nissen fundoplication in day-care setting.

Methods

Since 2003, patients undergoing laparoscopic Nissen fundoplication for proven symptomatic gastro-oesophageal reflux disease (GORD) were preferentially treated as day-cases. Suitable patients were admitted to a dedicated day unit and discharged later. Standard protocols were formulated for perioperative analgesic, anti-emetic use, postoperative oral intake and discharge policy. Patients were reviewed at 6 weeks and asked to complete a satisfaction questionnaire.

Results

Thirty patients were admitted as day cases for laparoscopic Nissen fundoplication; median age

38 (range 18-60) years, Male: female ratio was 2.1:1. All patients were ASA grade 1-2. All patients had significant symptoms of GORD. Symptoms duration on average was 8.4 years (range 1- 40 years). Median operating time was 51mins (range 25-90). 83% of the patients were discharged within 4-6 hours of surgery. Five patients (17%) were admitted overnight. Indications included pain (n=2), and side effects of opiate use (n=3). Mean hospital stay in the admitted group was 50 hrs (range 24-108). 11 patients (22.4%) complained of transient dysphagia in immediate postoperative period. Completed questionnaires were returned by 86%. The majority 74% satisfied with the day case surgery experience. No patient discharged from day care was readmitted.

Conclusions

Our experience demonstrates that laparoscopic Nissen fundoplication can be performed in a day-care setting in a safe manner and with a high degree of patient acceptability and satisfaction.

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92 Long term evaluation of median and ulnar nerve injuries

Aim

Median and/or ulnar nerve injury causes significant disability and usually occurs in a young working population. The aim of this study was to evaluate long-term outcome after major nerve division treated in a tertiary referral unit.

Methods

All median and ulnar nerve injuries to the arm, forearm and wrist were included. Sixty-two patients were identified between 1989 and 2003. Assessment was by chart review, disability of arm, hand and shoulder (DASH) questionnaire and clinical examination of sensation (Semmes-Weinstein monofilaments and two-point discrimination), motor function (range of movement and dynamometry) and dexterity (pegboard).

Results

Eight female and 54 male patients (1: 6.8) ranged from six to 64 years (mean; 27.5 years, median; 23.5 years). Two thirds were dominant hand injuries and glass was implicated in 75% of cases. Both nerves were divided in 21% of patients and in 76% nerve transection was complete. Eighty per cent of patients suffered concomitant tendon or muscle injury, ranging from one to 13 structures. Standard epineural repair was used in all cases followed by postoperative splinting, early active mobilisation and outpatient follow-up. Motor function was good or excellent, with average sensory recovery in the majority of cases.

Conclusion

This study quantifies long-term recovery of patients with major upper limb nerve injury using standard treatment protocols.

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93 Glycaemic control plus arginine supplementation attenuates the impaired wound healing in a diabetes mellitus experimental model

Aims

Various agents including the amino acid arginine have been shown to be effective in enhancing wound healing in non-glucose-controlled diabetic models. We tested the hypothesis that tight glucose control would enhance wound healing and that this would be further enhanced by arginine supplementation in an experimental model of diabetes mellitus.

Method

Thirty male Sprague Dawley rats were divided into five groups with average daily glucose levels in the diabetic insulin-treated groups kept below 10mmol/L and arginine supplementation of 1g/kg/day was administered via intraperitoneal injection to the arginine groups. All animals underwent a

dorsal skin wound incision and the placement of six polyvinyl alcohol sponges subcutaneously to collect wound fluid. At day-10 all animals were sacrificed and we measured fresh and fixed tensile strength, hydroxyproline, transforming growth factor beta-1 and nitric oxide levels.

Results

See Table 1 below.

Conclusion

This study shows the synergistic benefits of tight glycaemic control and arginine in a wound healing experimental diabetes mellitus model. This data gives further support for the need to investigate the potential benefits of arginine in diabetic patients in clinical trials.

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Table 1

	CONTROL GROUP	DIABETIC NON-INSULIN-TREATED GROUP	DIABETIC NON-INSULIN-TREATED + ARGININE GROUP	DIABETIC INSULIN-TREATED GROUP	DIABETIC INSULIN-TREATED + ARGININE GROUP
Fresh Tensile Strength	3.57	1.1 (30%)	1.44 (40%)	2.50 (70%)	3.27 (92%)
Fixed Tensile Strength	8.52	2.1 (25%)	2.88 (34%)	6.02 (71%)	6.98 (82%)
Hydroproline Analysis	657.21	41.9 (6%)	95.5 (15%)	451 (69%)	492.4 (75%)
TGF- β 1	32,121.2	5,370.75 (17%)	9,114.85 (28%)	19,278 (60%)	25,304.95 (79%)
Nitric oxide levels	37	20 (54%)	32 (86%)	30 (81%)	41 (111%)

94 The role of isolated limb thermal preconditioning in flexor tendon healing

Aims

Thermal preconditioning is known to reduce inflammation by formation of heat shock proteins. This study evaluates the role of isolated limb thermal preconditioning in flexor tendon repair.

Materials & Methods

In a flexor tendon repair rabbit model the treatment group underwent isolated limb thermal preconditioning, by elevating their limb temperature to 41.5 °C for twenty minutes. Animals were sacrificed at three weeks and six weeks and compared with controls. Macroscopic adhesions, microscopic inflammation and biomechanical analysis of the repaired tendons were assessed.

Results

Macroscopic analysis demonstrated a significant

improvement in adhesion formation in the three week treatment group ($p=0.0038$). The total inflammatory infiltrate was significantly reduced for all treatment groups ($p=0.003$). The difference in ultimate tensile strength was not significant at three weeks, and significantly increased six weeks in the treatment group ($p=0.0001$).

Conclusion

Isolated limb thermal preconditioning is an effective method of increasing HSP72 expression in a flexor tendon model. Preconditioning reduced inflammation and adhesion formation without adversely affecting the repair strength. Isolated limb thermal preconditioning therefore has the potential to improve clinical results in flexor tendon surgery.

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95 Biomechanical assessment of skin suture techniques in a porcine model

The optimal scar is a fine, flat, concealed linear scar lying within or parallel to natural skin lines, without contour irregularity, distortion of adjacent anatomic or aesthetic units or pigment changes.

Since every skin incision, traumatic or surgical, heals with a scar it behoves all surgeons to perform wound closure likely to achieve the most discreet scar possible for patients increasingly conscious of cosmetic outcomes.

Good repair principles are assumed. Since repair strength is 5-10% that of unwounded skin after 1-2 weeks and only reaches the final 80% at 8-10 weeks, the contributing strength of dermal sutures is very important to maintain wound strength and prevent scar stretching during the period after removal of epidermal sutures at 1-2 weeks, particularly in sites where movement or distraction of the repair is practicably unavoidable.

This study compares interrupted versus continuous monofilament nonabsorbable suture (Prolene) repairs with and without an interrupted monofilament absorbable (Monocryl) dermal layer. Porcine skin was incised and repaired by a single operator. The force(N) was recorded at 2 mm gap formation and repair failure induced by distraction using a Zwick I tensiometer. Results were analysed using ANOVA and Tukey's multiple comparison tests.

There was no significant difference between a Prolene repair using interrupted or continuous sutures for gap formation or for repair failure. The addition of a Monocryl dermal suture significantly increased repair strength, more than two-fold. There was also a significant increase in the force required to produce gap formation, five-fold for interrupted Prolene and three-fold for continuous Prolene repairs.

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Session 12: Oncology Session

96 Imaging of the liver after colorectal carcinoma resection: a waste of time?

Aims

Guidelines from the American Society of Clinical Oncology, 1999 and the American Society of Colon and Rectal Surgeons, 2004 advise that routine use of hepatic imaging in the follow-up of colorectal cancer resection should not be performed. As routine CT scanning continues to be the standard of care in this country, we aimed to evaluate whether such aggressive follow-up is justified.

Methods

Information was gathered from the colorectal database, which is updated prospectively from the hospital HIPE system. All patients who had colorectal tumours resected since 1999 were included. Results of these patients' abdominal CT scans were then downloaded from the hospital computer system.

Results

Two hundred and fifty-eight patients underwent colorectal tumour resection since 1999. One

hundred and eight patients were excluded, as they only had one pre-operative scan, on the basis of advanced age, multiple co-morbidities or patient preference. One hundred and fifty patients were included in the study and had 448 scans performed, i.e. on average, three per patient. Thirty-four patients were found to have inoperable liver metastases. Two pre-operative scans revealed liver metastases, and these patients were referred for surgery. Only four patients were found to have operable liver metastases on follow-up scanning and underwent potentially curative liver resections.

Conclusions

Only 2.6% of patients screened for hepatic metastatic disease underwent liver resection, and only half of this group were alive at two years. Our figures concur with the advice of the American guidelines, and suggest that other forms of follow-up may be more successful at detecting recurrences at an earlier stage.

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97 Growth factors regulation of Ets-2 protein and c-Myc in recurrent breast cancer

Ets proteins are effectors of the MAPK pathway that have been implicated as a downstream mediator of Her-2 signaling. Studies from our group have reported a strong association between Ets-2 expression and reduced disease free survival ($p > 0.0001$). Binding motifs have been identified in the promoter region of the oncogen c-Myc.

Hypothesis

Ets-2 mediates breast cancer progression by regulating the expression of the oncogene c-Myc.

Methods

Ets-2 and c-Myc were localised by immunohistochemistry and immunofluorescence in breast cancer tissue.

SK-BR3 cells (ER -ve, Her2 +ve), endocrine sensitive MCF-7 cells (ER +ve, Her2 -ve) and the endocrine resistant transformed LY-2 cells (ER +ve, Her2 -ve) were treated with growth factors EGF and bFGF.

LY-2 cells were transfected with Ets-2 expression vector pCGN-ets-2 using the Amaxa nucleofactor technology.

Protein expression of Ets-2 and c-Myc was determined by western blotting.

Results

Ets-2 and c-Myc were found to be expressed within the tumour epithelial cells of breast cancer tissue. Immunofluorescence showed Ets-2 and c-Myc were both localised primarily to the nuclei of the tumour epithelial cells and were found to be co-expressed. Greater expression of both Ets-2 and c-Myc were detected in LY-2 cells compared

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to their parent MCF7 cells. EGF and bFGF increased the expression of Ets-2 and c-Myc in LY-2 and SK-BR3 cell lines. Transfection of Ets-2 induced c-Myc protein expression in LY-2 breast cancer cells.

Conclusion

These data indicate that growth factors mediate breast cancer cell survival at least in part by activating the transcription factor Ets-2 thereby up-regulating protein expression of the oncogen c-Myc.

98 Hypoxia mediates invasion of breast cancer cells via increased expression of the chemokine receptor CXCR4

Aims

Experimental evidence has demonstrated that hypoxia stimulates tumor progression, and resistance to chemotherapy. Recently, the chemokine receptor CXCR4 has been implicated in organ-specific metastasis of breast cancer. We hypothesized that hypoxia would stimulate increased CXCR4 expression and thus increased invasion of breast cancer cells. We also compared Her 2 positive and Her 2 negative cell lines to determine if a difference in their response to hypoxia might account for the increased aggression of Her 2 positive breast cancer.

Methods

Four cell lines were cultured; SKBR3, MCF-7, BT474 and MDA MB 231. These cell lines were then subjected to hypoxia for 6, 12, 24 or 48 hrs.

Total RNA was extracted for RT-PCR. Protein was extracted for western blots. Chemoinvasion was verified using a modified Boyden chamber.

Results

Hypoxia stimulated increased CXCR4 expression at both RNA and protein levels. The increase in CXCR4 expression in Her 2 positive cells was more pronounced with up to 35-fold increases in CXCR4 expression after hypoxia in one Her 2 positive cell line.

Conclusions

Tumour hypoxia significantly increases CXCR4 expression in breast cancer causing increased invasion of cells. The increased aggression of Her-2-neu positive breast cancer may be due to increases in CXCR4 expression stimulated by hypoxia.

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99 Parallel gene and protein expression analysis of the immune response to major surgery in oesophageal cancer patients treated with surgery alone or a multimodality regimen

Aims

A multimodality approach is increasingly utilised in gastrointestinal cancer, but the impact of neoadjuvant chemoradiotherapy on the immune response to surgery is unclear. This study examined the pattern of postoperative gene expression and protein production of pro-inflammatory TNF-alpha and anti-inflammatory IL-10 in non-randomised but stage-matched patients with oesophageal cancer undergoing a multimodality protocol or surgery alone.

Methods

Microchip array technology was used to measure serum IL-10 and TNF-alpha pre-operatively and

on days 1 and 7 postoperatively in 22 patients (13 multimodal, nine surgery). Real time quantitative (RQ) PCR was performed on RNA extracted from whole blood in 11 patients (seven multimodal, four surgery). Triplicate reactions were performed for IL-10 and TNF-alpha using duplicate endogenous controls, pre-operatively and days 1 and 7 (198 assays).

Results

There was a median 28-fold increase in relative IL-10 gene expression on the first day after surgery compared to pre-operative samples ($p < 0.001$). This dropped to a four-fold increase after one week and mirrored parallel serum protein analysis. The increase in TNF-alpha gene expression did not

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reach statistical significance and was not matched by a significant difference in serum levels. No differences were observed between those treated with surgery alone versus multimodal therapy.

Conclusions

Evolving gene expression and protein quantification technology is producing a new

understanding of the complex immune response to surgery and multimodal therapy. This study to date has identified no extra immune cell perturbations in multimodality patients, and the study requires larger numbers and expansion to encompass both serum and tissue-specific cytokines.

100 Analysis of Ex-vivo staging of colorectal carcinoma by sentinel lymph node mapping

Aims

Sentinel lymph node (SLN) biopsy is widely used for solid tumors and has been proposed for use in staging colorectal cancer (CRC). Few studies have examined the ex vivo lymphatic mapping (EVLM) technique for staging CRC. We hypothesized that EVLM is technically feasible, sensitive, accurate, and improves the staging of CRC.

Methods

Within 20 minutes of surgical excision 1 ml of one per cent isosulfan blue dye was injected subserosally around colon cancers (n=10). The first to fourth blue-staining nodes seen within five minutes of injection were marked as sentinel lymph nodes. For rectal cancer (n=10) the mesorectum was dissected ex vivo to identify blue nodes nearest the tumor as sentinel lymph nodes. Multilevel microsections of sentinel lymph nodes and all other retrieved nodes was performed and these were stained with hematoxylin and eosin and immunostained for cytokeratin.

Results

Twenty patients underwent 20 cancer resections with EVLM from September 2003 to July 2004. SLN were identified in 16 of 20 (80%) specimens. The mean number of SLN obtained was 2.7 (range, 0-6). Pathologic evaluation demonstrated nodal metastasis in nine specimens. The SLN was tumor-positive in seven patients. The overall accuracy of EVLM was 77.7%. Five patients with H&E node negative disease were upstaged when found to have micrometastases by IHC staining (31%).

Conclusions

In conclusion, EVLM is technically possible in 80 per cent of patients with CRC. Although overall accuracy was high, the SLN status correlated poorly with the true nodal status of the CRC. However, EVLM improves pathologic staging of patients and therefore may be of value in CRC.

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101 Immunohistochemical detection of lymph node micrometastases in rectal cancer does not predict recurrence

Aim

Lymph node metastasis is the most important predictor of prognosis in colorectal cancer. The aim of this study was to determine the rate of lymph node micrometastases and evaluate their prognostic significance with rectal cancer.

Methods

Patients with either Dukes A or B rectal carcinoma who had undergone curative resection by either low anterior resection or abdominal perineal resection between 1991 and 2000 were selected.

None of the patients received adjuvant or neoadjuvant therapy. A single section from each lymph node was stained with haematoxylin and eosin (H+E) and with CAM 5.2 (Becton Dickinson, San Jose, Ca USA) by immunohistochemistry. Statistical analyses were performed with the chi-square test.

Results

A total of 774 lymph nodes with a median of 14 lymph nodes per patient were examined in a cohort of 56 patients with a median age of 66

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years. In the 56 patients in whom lymph node metastases was not detected by haematoxylin-eosin staining, cytokeratin staining was positive in 15 lymph nodes (1.9%) from 10 patients (17.8%). Nine patients (16.1%) had a disease recurrence at a median follow-up of 73 months. The presence of lymph node micrometastases by immunohistochemistry did not predict either disease-free (p=0.445) or overall survival (p=0.636).

Conclusion

No significant relationship was observed between disease relapse and rectal micrometastases detected by immunohistochemistry. This technique therefore is unlikely to help identify patients at higher risk of relapse and will not facilitate the selection of patients who may benefit from adjuvant chemotherapy.

102 Th1/Th2 imbalance in patients with malignant brain tumours

The Central Nervous System (CNS) has been regarded as being an immune privileged site but as our understanding of the immune system has improved, this idea is under threat. Recent studies have shown that immunomodulation occurs in the CNS.

Aim

To evaluate cytokines produced by T-Helper cells type 1 and 2 (Th1 and Th2) in the serum of newly diagnosed Glioblastoma multiforme (GBM) patients.

Methods

Prospective analysis of the serum samples collected from patients with GBM (n = 20) and to match these with age and sex matched controls (n = 20). The samples were analysed using a

Proteoplex multiarray kit and the results were analysed for statistical significance using the Mann Whitney U test.

Results

Analysis of the Th1 and Th2 cytokines showed that the Th2 cytokines IL-4 and IL-10 were raised (IL-4; p = 0.041, IL-10; p = 0.005), while there was no significant increase in IL-2, IL-6, IL-12 and TNFa (Th1 cytokines).

Conclusion

In our study we have shown that in the case of GBM patients there is an imbalance in the pattern of the Th1 / Th2 cytokine profile, with an increase in the Th2 cytokine levels which has not been seen in other studies in malignant brain tumour patients. This imbalance in the Th1/Th2 cytokine profile could suggest an ineffective anti-tumour response.

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Session 13: Breast Research Session

103 Myc signalling in survivin regulation in breast tumour progression

Breast cancer is under the control not only of circulating steroids but also locally produced growth factors. Survivin has emerged as a unique regulator of cell death through its response to growth factors, which we have previously shown to be MAP kinase dependent. The transcriptional complex myc/max is an oncogene lying downstream of the MAP kinase pathway suggesting a possible role in survivin's regulation.

Aim

To investigate the ability of growth factors to induce signalling of the MAP kinase effector transcription factor c-myc in human breast cancer.

Methods & Results

Treatment of SKBR3 breast cancer cell line with growth factors induced phosphorylation and recruitment of c-myc to its response element in

the promoter region of the target gene survivin as demonstrated by electromobility shift analysis and ChIP assays. Over-expression of c-myc increased survivin protein expression. This effect was eliminated when c-myc siRNA was transfected into the cells. Northern and Western blotting saw increased expression of the myc target gene survivin, in response to the growth factors, at both the mRNA and protein levels. Using confocal fluorescent microscopy myc was located to the nucleus of breast tumour epithelial cells and was found to be expressed in 60% of breast tumour patients.

Conclusions

These data provide evidence that growth factors signal through the transcription factor myc and indicate a role for myc/max in the transcriptional regulation of survivin in breast cancer. Growth factor mediation of cell survival may be pivotal to the development of endocrine independent breast cancer.

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104 The psychosocial and demographic correlates of post-mastectomy breast reconstruction

This retrospective study compared psychological well-being (as measured by depression anxiety, self-esteem and body image scores) across four different breast cancer treatment groups (breast conserving surgery, mastectomy alone, mastectomy and immediate breast reconstruction, mastectomy and delayed breast reconstruction).

The study specifically examined the role of immediate versus delayed breast reconstruction in the psychological rehabilitation process of breast cancer survivors in Ireland. Coping strategies and demographic details were incorporated in the analysis. Participants ($N=133$) were selected from hospital databases according to the type of surgical treatment they had undergone since their breast cancer diagnosis. All women were

registered under the care of a general surgeon and a plastic surgeon (in the case of the reconstruction groups) and were between one and seven years post surgery. Similar levels of positive psychological adjustment and self-concept were found across the four groups. However differences were observed between the four groups on levels of anxiety ($p < 0.05$) with the mastectomy alone and mastectomy and immediate reconstruction demonstrating the lowest levels. Interestingly, 72% of women who had undergone delayed breast reconstruction would have preferred to have the procedure immediately at the time of their mastectomy. The high preference rate for immediate breast reconstruction amongst mastectomy patients should be considered by the Irish Health Service Executive. Many regional hospitals do not provide this service and so patients should be made aware of the option of attending a specialized Breast Unit where reconstructive services are available.

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105 Tamoxifen induced er activity in endocrine resistant breast cancer

Aims

In breast cancer, though most ER positive patients will initially respond to endocrine treatment, many will eventually relapse. Inappropriate levels of the ER co-activator AIB-1 are thought to be responsible for the agonist-like activity of tamoxifen linked with endocrine resistance. Here we assess differences in estrogen function in endocrine sensitive and endocrine insensitive breast cancer cells.

Methods

ERa, AIB1, and the ER target gene, cyclin D1 were localised by immunohistochemistry and immunofluorescence. Breast cancer cell lines; tamoxifen sensitive, MCF7 and the tamoxifen resistant, transformed LY2 cells were treated with 17 β -estradiol and tamoxifen. Protein and mRNA expression was assessed by Western and Northern blotting, respectively. Proliferation was determined using standard MTT assays.

Results

ERa and AIB1 were found to be expressed predominantly in the nuclei, and cyclin D1 in the cytosol, of tumour epithelial cells. Immunofluorescence demonstrated co-localisation of both AIB1 and cyclin D1 with ERa. Estrogen induced cell proliferation and cyclin D1 expression in MCF-7 cells, which was inhibited by tamoxifen, whereas in LY2 cells, treatment with both estrogen and tamoxifen resulted in breast cancer cell growth and target gene expression. Expression of the ER co-activator AIB1 at both the mRNA and protein level was found to be greater in LY2 cells compared with their parent MCF-7 cells.

Conclusion

In endocrine resistant breast cancer, tamoxifen induced ER activity may be due, at least in part to increased expression of the ER-co-activator AIB1.

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106 Growth factor activation of the mitogen-activated protien (map) kinase pathway increases breast coactivator protein expression and may drive breast tumourigenesis

In breast cancer, over-expression of the epidermal growth factor receptor Her2 is associated with poor overall survival rates. Over-expression leads to an increase in steroid co-activator protein expression. This occurs though the MAP-kinase pathway and may serve to drive breast tumourigenesis and to alter endocrine therapies from antagonist to agonist profiles.

Aims

To characterize the regulation of estrogen receptor coactivator proteins and associated mRNA following stimulation of epidermal growth factor receptors.

Methods

Western blotting in SK-Br-3, MCF-7 breast carcinoma cell lines and primary breast cultures assessed the protein expression of the coactivator proteins, SRC1 and AIB1. Associated co-activator mRNA was assessed by northern blotting. Activation of the MAPK pathway was assessed

by utilization a MEK inhibitor, PD 98059. Human breast carcinoma tissue, known Her2Neu status, was stained using immunohistochemical techniques for activated MAPK.

Results

Up-regulation of the level of expression of the coactivator proteins (AIB1 and SRC1) was demonstrated following stimulation with epidermal growth factor, basic fibroblastic growth factor and Heregulin. Down-regulation of coactivator protein expression was shown following incubation with Herceptin. These results signaled through the mitogen activated protein kinase pathway, demonstrated using the MEK inhibitor PD 9805.

Conclusions

These results implicate a growth factor pathway, acting through a MAPK signaling pathway, in the regulation of the coactivator proteins. Alterations in the level of expression or activation of the coactivator proteins alters the delicate balance at the estrogen receptor and may drive not only tumorigenesis but also the development of endocrine resistance.

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107 The combined M30/Bcl2 apoptotic index - a novel prognostic index for invasive ductal breast cancer

No studies have selectively evaluated epithelial apoptosis in invasive breast cancer (IBC) and correlated it with survival. The recent emergence of M30, an antibody specific for epithelial apoptosis, now enables this. Bcl2 was used to measure antiapoptotic activity.

Aims

To determine if M30 and Bcl2 immunoreactivity correlate with longterm outcome in IBC.

Methods

All patients with grade three infiltrating ductal breast cancer diagnosed during 1999 (n=17) who had similar adjuvant treatment, were included. Serial sections from each tumor were stained immunohistochemically for M30 and Bcl2. An apoptotic index (AI) was established for both M30 and Bcl2 and individual as well as combination scores were then correlated with five year survival.

Results

A protocol was first optimized to detect M30 and Bcl2 immunoreactivity in archival breast samples. In total, 39% of the cohort (n=6) were strongly M30 positive and the five year survival (5ys) of this group was 71%. In contrast, 5ys was 50% in M30 negative patients. Bcl2 expression directly correlated with improved survival. Of patients who were M30/Bcl2 positive overall 5ys was 80%. The combination of both indices thus generated a powerful predictive index of long-term survival in invasive breast cancer.

Conclusions

This is the first study to selectively correlate epithelial apoptosis with survival in breast cancer. M30 immunoreactivity correlated with overall survival. When Bcl2 and M30 scores were combined the correlation with overall survival improved even further. These findings identify a novel prognostic index ("The M30/Bcl2 Index") that accurately predicts long-term survival in invasive breast cancer.

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108 Mammographic screening of a referral population

Screening mammography is of proven benefit in women aged 50 to 70 years of age. The lack of screening programme in the western region has led to a cohort of symptomatic women being referred for mammography.

In UCHG, the policy of our unit is to perform screening mammogram on all asymptomatic women over the age of 40 referred to symptomatic breast unit. A waiting list initiative to provide mammography was initiated and 565 consecutive patients were recruited from the 'screening population' who were referred because of HRT use, family history or screening age group.

In our group the mean age was 58 years (range 41 - 78) and while 190 had some family history of breast cancer, only 185 had used HRT for >5 years.

Following the initial mammography, 425 were reported as normal and discharged to the referring doctor. Twenty-seven women required further radiological assessment of whom 10 had further mammographic views and 17 needed ultrasound evaluation. Of the 27 cases 13 had showed an abnormality that required a biopsy which resulted in five benign histology and eight cancers. In the cancer group we had three DCIS and five invasive carcinoma of whom four with stage I cancer and one with stage II cancer.

The yield of 12/1000 cancers is greater than that for screening population. As this study highlights the need for mammographic screening in an asymptomatic referral population, it gives a clear indication of the need for breast check to be available nationally as the majority of this asymptomatic population are in the screening age group.

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109 A molecular analysis of the relationship between hormone receptors and mammaglobin in breast cancer

Our primary aim was to quantitate and compare the levels of ER α , ER β and mammaglobin mRNA expression in malignant and benign breast specimens and to ascertain any relationship between mRNA levels, prognostic indicators and patient outcome.

Two per cent of tumours did not express ER α mRNA and 11% did not express ER β mRNA. (6% of tumours proved to be mammaglobin negative). No significant difference was evident between the benign and tumour mRNA levels for any gene. Spearman's correlation tests showed that in the tumour group ER α mRNA levels positively correlated with ER β mRNA levels for both pre (p=0.002) and post (p=0.001) menopausal patients. It was also demonstrated that elevated ER α mRNA levels were associated

with high mammaglobin mRNA levels in both benign (p=0.025) and tumour tissue (p=0.035). Kaplan-Meier survival analysis did not report any significant association between ER mRNA levels and disease free survival. However, both five and 10 year overall survival was reduced in premenopausal patients expressing below median levels of ER β .

Demonstrating an association between ER α and ER β could be of relevance in that high levels of ER α are accompanied by high levels of ER β , suggesting the existence of molecular crosstalk between these two markers potentially resulting in either an enhanced or diminished response to therapy. The correlation observed between ER α and mammaglobin may serve to further characterize breast cancer cells, identifying them by mammaglobin expression and determining their hormonal status by ER α analysis.

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