



West Midlands Surgical Society

**Autumn Meeting
9TH NOVEMBER 2018**

**The Queen Elizabeth Hospital,
Birmingham**



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Special Thanks to our Guest Reviewers:

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Mr Bala Piramanayagam, Consultant Colorectal & General Surgeon, George Eliot Hospital

Mr Deepak Singh-Ranger, Consultant Colorectal & General Surgeon, New Cross Hospital

Programme

08.45 **REGISTRATION AND COFFEE**

09.15 **WELCOME**

Mr Mark Gannon – President WMSS

Scientific Short Papers

09.20 ***A Gene Expression Profile Predicting Prognosis for Patients with Colorectal Peritoneal Metastasis***

S Hallam, H Youseff, A Beggs

University of Birmingham Hospitals NHS Trust

09.29 ***Bypass Vascular procedure***

T. McDermott, S. Zaman, J. Newman, S.D. Hobbs, A.W. Garnham, M.L. Wall

Russells Hall Hospital, Dudley

09.38 ***Does Prioritisation of Urgency by the Booking Surgeon Help in Organising a CEPOD list?***

A Banks, A Robinson, K Marimuthu, T Bullen

Royal Stoke University Hospital

09.47 ***Endosponge Management of Oesophagogastric Leaks***

Abdelrahman M, Higgs SM, Dwerryhouse S, Vipond MV, Hornby ST

Gloucestershire Royal Hospital, UGI Surgery Unit.

09.56 ***Engagement of Foundation Year Doctors in Surgery***

Aliyah Choudhary, Sarah Powell-Brett, Simon Anthony Fallis

Good Hope Hospital

10.05 ***EVAR Offers a Survival Advantage to Patients Not Suitable for Open AAA Repair***

O Fisher, Z Gates, R Benson, E Parkes, J Shakespeare, S Goodyear, D Higman, A

Mahmood, N Matharu, D Srinivasmurthy, S Sayed, Christopher Imray

Department of Vascular Surgery - University Hospital of Coventry & Warwickshire and University of Birmingham.

10.14 ***A Virtual Surgical Clinic: A Service Evaluation***

Georgia Layton, Stephanie Clark, Samuel Hutchinson, Simardeep Singh Sadhra,

Salman Mirza

Walsall Healthcare NHS Trust

- 10.23 ***Improving the 'Abscess Pathway' at University Hospital North Midlands: A Quality Improvement Project***
H Thursby, W Ball, T Athwal
University Hospital North Midlands & Royal Shrewsbury Hospital
- 10.32 ***International, patient and outcome assessor blinded, randomised controlled trial of standard closure of stoma site versus prophylactic biologic mesh reinforcement***
Reinforcement of Closure of Stoma Site (ROCSS)
Collaborative and West Midlands Research Collaborative
- 10.41 ***HYDratIon and Bicarbonate to Prevent Acute Renal Injury After Endovascular Aneurysm Repair: Pilot/Feasibility Randomised Controlled Study***
Saratzis¹, Chiochia², Jiffry³, Hassanali², Singh², Imray CH³, Bown MJ⁴, Mahmood³.
1 NIHR Leicester Biomedical Research Centre, University of Leicester, Leicester, UK.
2 Oxford Surgical Intervention Trials Unit (SITU), Oxford University, Oxford, UK.
3 University Hospital Coventry and Warwickshire, Coventry, UK.
4 NIHR Leicester Biomedical Research Centre, University of Leicester, Leicester, UK.
- 10.50 ***Perioperative Immune Function and Pain Control May Underlie Early Hospital Readmission and 90 Day Mortality Following Lung Cancer Resection: A Prospective Cohort Study of 932 Patients***
Nicola Oswald, James Halle-Smith, Amy Kerr, Joanne Webb, Paula Agostini, Ehab Bishay, Maninder Kalkat, Richar Steyn and Babu Naidu
University of Birmingham and Heart of England NHS Foundation Trust
- 10.59 ***MORNING COFFEE
(Plus Visit to Trade Stands)***
- 11.30 ***Perioperative Outcomes of Two-Stage Ivor-Lewis Oesophagectomy: A Single Surgeon Series***
Sivesh K Kamarajah, Pritam Singh, Jan Dmitrewski
Queen Elizabeth Hospital
- 11.39 ***Mata-analysis of direct surgical vs endovascular revascularisation for Aorto-Iliac Occlusive Disease (AIOD)***
Sobath Premaratne, Jeremy Newman, Simon Hobbs, Andrew Garnham, Mike Wall
Black Country Vascular Network

- 11.48 ***Raman needle probe for in vivo identification of breast cancer***
A. P. Dudgeon^{1,3,4,*}, C. Keen², D. Ferguson², C. A. Kendall^{1,3,4}, J. C. C. Day⁴, N Stone¹
¹Gloucestershire Hospitals NHS Foundation Trust, Gloucester, Gloucestershire, GL1
3NN, ²Royal Devon and Exeter NHS Foundation Trust, ³Physics and Medical Imaging,
College of Engineering, Mathematics and Physical Sciences, University of Exeter,
⁴Interface Analysis Centre, School of Physics, University of Bristol
- 11.57 ***Review of Psoas Muscle Abscess***
Mr Ganesh Kumar Rajendran & Mr Rajan Kumar Patel
Russell's Hall Hospital, Dudley
- 12.06 ***Single- vs dual-antiplatelet therapy in carotid endarterectomy – what is the evidence?***
Bura K, Goh YL, Shawish E
Shrewsbury Hospital
- 12.15 ***Systematic Review of Therapeutic Nipple-Sparing -v- Skin Sparing Mastectomy***
Yasser Al Omran, Ria A Agha, Georgina Wellstead, Harkiran Sagoo, Ishani Barai,
Shivanchan Rajmohan, Mimi R Borrelli, Martinique Vella-Baldacchino, Dennis P Orgill,
Jennifer E Rusby
University of North Midlands et al (see abstract)
- 12.24 ***The Applications of Colorectal Tumour Derived Organoids – The Birmingham Experience***
K Wanigsooriya, J Silva, A Stodolna, J Stockton, s Hallam, R Tyler, V Pestinger, R
Hoare, T Ismail, A Beggs
University of Birmingham
- 12.33 ***The comparison of recurrence rate after different modalities of treatment for sacral pilonidal sinus (Excision with lay open and primary closure) and the contributing factors.***
Mr Amaar Aamery, Dr Saleem Malik, Dr Wai Tung Chan, Mr Deepak SINGH-RANGER
New Cross Hospital
- 12.42 ***Preliminary Assessment of a Large National Database Investigating Factors Influencing the Effect of Gender on Outcomes After Lower Limb Bypass***
R Benson, D Lasserson, C Imray and A Bradbury
University Hospitals Coventry and Warwickshire NHS Trust, University of
Birmingham, Warwick Medical School, University of Warwick, Heart of England NHS
Foundation Trust, Birmingham.
- 12.51 Short presentation by Wesleyan

13.00

LUNCH

(plus visit to trade stands)

13.45

AGM PLUS INAUGURATION OF NEW PRESIDENT

SYMPOSIUM

14.00

OPPORTUNITIES AND THREATS OF THE NHS

Professor Sir Bruce Keogh,
Medical Director of NHS England

14.35

LESSONS FROM A WRONGFUL MANSLAUGHTER CONVICTION

Mr David Sellu,
Honorary Consultant Surgeon, St Mark's Hospital, London

15.10

GROSS NEGLIGENCE MANSLAUGHTER INDEPENDENT REVIEW GROUP

Professor Iqbal Singh, OBE FRCP
Chair Centre of Excellence in Safety for Older People
Consultant Physician in Medicine for Older People

15.45

GROSS NEGLIGENCE IMPACTS ON SURGEONS IN TRAINING AND PRACTICE

Mr Jerard Ross,
Medico-legal Advisor, MDU

16.20

TRAINING UPDATE

Mr Mike Hallissey

16.30

TEA AND AWARD OF REGISTRAR'S PRIZES

Please note prizes will not be awarded in absentia

POSTER LIST – NOVEMBER 2018

<p>A New Treatment Pathway to Reduce Waiting Times for Hand Trauma</p> <p>James M Halle-Smith, Mark Foster</p> <p>Hand Surgery Department, Queen Elizabeth Hospital</p>
<p>Abdominal aortic aneurysm repair in patients with liver and kidney transplant</p> <p>Sobath Premaratne, Navid Ahmad, Jowin Bagsina, Jonathan Hopkins, Martin Duddy, Rachel Sam, Ket Tai Sang, Philip Nicholl, Vasileios Psarros, Allen Edwards, Gary Lambert, Radu Rogoveanu, Mark Kay, Alok Tiwari</p>
<p>Focus group PPI feedback on treatment of Fistula-in-ano</p> <p><u>Elizabeth Li</u>^{1,2}, James Glasbey^{1,2}, Margaret O’Hara¹, Saloni Mittel¹, Victor Rose², Sarah Squire², Sharon Garner¹, Arlo Whitehouse¹, Mike Keighley⁴, Thomas Pinkney^{1,2}</p> <p>¹ University Hospital Birmingham, ² University of Birmingham, ³ Patient Partner ⁴ Keighleycolo Ltd</p>
<p>Gallstone Pancreatitis: The Race to Laparoscopic Cholecystectomy</p> <p>Helen Foss and Megan Dowdeswell</p>
<p>Quality Improvement Project at Heartlands Hospital – Vascular Surgery Discharge Summaries</p> <p>Ryan Laloo – Academic FY2 at Heartlands Hospital</p>
<p>The Development of a New Inpatient Surgical Database</p> <p>S Resool, Mr S Odogwu, Walsall Manor Hospital</p>
<p>The Impact of Undiagnosed Airflow Obstruction on Patients Considered for Elective Aortic Aneurysm Repair</p> <p>O Fisher, R Benson, E Parkes, J Shakespeare, S Goodyear, D Higman, A Mahmood, N Matharu, D Srinivasmurthy, S Sayed, Christopher Imray</p> <p>Department of Vascular Surgery - University Hospital of Coventry & Warwickshire. University of Birmingham, Department of Respiratory Physiology – University Hospital of Coventry & Warwickshire, Worcestershire Royal Hospital and University of Warwick</p>
<p>The importance of education and guidelines in streamlining referrals for carotid endarterectomy (CEA) for symptomatic carotid stenosis (CAS)</p> <p>V Cubas, R Tullett, E Gwinnell, E Newman, M Wall</p> <p>The Dudley Group NHS Foundation Trust</p>
<p><u>Through the SpyGlass™: ‘ultra-slim’ cholangioscopic lithotripsy of bile duct stones via a percutaneous T-tube tract.</u></p> <p>C Baker, FY2 (General Surgery), S Mastroridis, Academic Clinical Fellow (General Surgery), D Sarma, Specialist Registrar (General Surgery), F Curran, Consultant Surgeon (Upper GI)</p> <p>New Cross Hospital, Wolverhampton</p>
<p>Use of hem-o-lok to lock the cystic duct in laparoscopic cholecystectomy</p> <p>Arif N, Karim MA, Fisher S, Bramhall S</p> <p>Hereford County Hospital, Wye Valley Trust</p>

A gene expression profile predicting prognosis for patients with colorectal peritoneal metastasis undergoing cytoreductive surgery and heated intraperitoneal chemotherapy

S Hallam, H Youssef, A Beggs

The University of Birmingham, University Hospitals Birmingham NHS Foundation Trust

Background

15% of colorectal cancers present with peritoneal metastases (CPM). Cytoreductive surgery and heated intraperitoneal chemotherapy (CRS & HIPEC) aims to achieve macroscopic tumour resection, combined with HIPEC to ablate microscopic disease. 5-year survival ranges from 20–65% in selected patients. Current stratification does not account for the molecular heterogeneity of CPM. Aim: To identify a gene expression profile predicting prognosis following CRS + HIPEC.

Methods

Retrospective cohort of patients with CPM who have undergone CRS & HIPEC. With palliative chemotherapy DFS is 11-13 months, therefore following CRS & HIPEC, DFS < 12 months was defined as poor prognosis (n=12) and DFS > 12 months as good prognosis (n=12). RNA was extracted from FFPE tumour blocks. 3' RNA-Seq libraries were constructed and sequenced to call differential gene expression.

Results

One hundred and sixty-four genes were differentially expressed in patients with poor prognosis following CRS & HIPEC (FDR 0.1, p value <0.05). Cellular activities attributed to the encoded proteins include cell proliferation, DNA damage response, angiogenesis, apoptosis and metastasis.

Conclusions

We have identified a gene expression profile in patients with poor prognosis following CRS & HIPEC. Biomolecular markers may complement existing clinical factors to improve patient selection and develop individualised treatments.

Abstract: Bypass Vascular Procedure

T. McDermott, S. Zaman, J. Newman, S.D. Hobbs, A.W. Garnham, M.L. Wall

Russells Hall Hospital, Dudley, West Midlands

Introduction

Femoral-distal and femoro-pedal bypass remains a challenging operation in a highly co-morbid population. Existing studies published are historical and were not produced in the era of best medical therapy. We present a contemporary series of these operations where angioplasty was not a feasible option.

Methods

All patients undergoing femoro-distal/pedal bypass in our centre over the time period June 2015 to April 2017 were analysed from a prospectively kept database incorporating both electronic and paper records.

Results

77 procedures were performed. M:F Ratio was 60:17. The mean age of the population was 69.5(11.4SD). The primary patency at one year was 45.5%, while primary assisted patency at one year was 80.0%. In patients requiring redo grafting after failure of primary grafting patency in the redo graft at one year was 63.6%. Limb salvage overall at 1 year was 83.2% for this cohort.

Conclusion

The results of this series suggest that patency is good in the BMT era and that the surgeon should be encouraged to continue this type of surgery. Graft surveillance is vital to maintain graft patency and redo grafting is to be encouraged.

“Does prioritisation of urgency of operation by the booking surgeon help in organising a CEPOD list?”

Banks, A.¹, Robinson, A.², Marimuthu, K.³, Bullen, T.⁴

Introduction

Emergency surgical operations in our trust are prioritised by the booking surgeon into categories of E1 (to be operated on within the hour), E2 (to be operated on within 6 hours) E3 (to be operated on within 12 hours) and E4 (to be operated on within 24 hours) to help to order the emergency list.

Methods

Between 1/1/2018 and 30/06/2018 1763 cases were booked onto the CEPOD list. Of which 124 were E1, 365 were E2, 577 were E3, and 697 were E4. 18 E1s breached, 88 E2s, 238 E3s and 229 E4s. Of the 88 E2 breaches, 56 were booked under general surgery. Retrospective case note review was performed of all E2 breaches.

Results

E2 breaches ranged from 9 to 4297 (median 312.5) minutes. When reviewing the diagnosis of patients booked as E2 there were a number of cases prioritised as E2 which we considered inappropriate, such as abscesses and normal appendixes.

Conclusions

Prioritising emergency surgical operations can help in organising a CEPOD list, however when performed by a diverse group of clinicians at different levels of training this can be counterproductive. We would suggest prioritisation by a single individual may be more appropriate.

¹ Royal Stoke University Hospital, UHNM Trust

² Royal Stoke University Hospital, UHNM Trust

³ Royal Stoke University Hospital, UHNM Trust

⁴ Royal Stoke University Hospital, UHNM Trust

Title: ENDOSPONGE MANAGEMENT OF OESOPHAGOGASTRIC LEAKS

Authors: Abdelrahman M, Higgs SM, Dwerryhouse S, Vipond MV, Hornby ST

Hospital: Gloucestershire Royal Hospital, UGI Surgery unit.

Background

The national anastomotic leak rate post oesophagectomy and gastrectomy is 7.1% and 5.1% respectively. This can lead to multi-organ failure and death. Treatments include re-laparotomy, re-thoracotomy and oesophageal diversion. Endosponge management works by placing a nasogastric tube covered with a negative pressure sponge dressing, through the anastomotic defect into the associated cavity. We describe our unit's experience.

Method

4 patients with post-operative oesophago-gastric leaks underwent endosponge treatment. This entails using a gastroscope, a pair of standard biopsy forceps and a standard sponge from a vacuum dressing kit attached to a naso-gastric tube, with that tube placed on 125mmHg suction. Procedure was done under general anaesthesia.

Results

Patients' median age was 59. All were males. 3 patients had an oesophagectomy and 1 had a total gastrectomy. 28 endosponge placement or changes were carried out (Range of 6-14 returns to theatre). Length of stay ranged from 19-79 days. Adjuvant techniques included percutaneous radiological guided drainage. There were no deaths.

Conclusion

Endosponge is effective in management of oesophagogastric leaks avoiding repeat surgery or diversion. It's labour intensive and requires additional modes of therapy. It provides timely source control and return to normal physiology in very ill patients.

Engagement of Foundation Year Doctors in Surgery
Aliyah Choudhary, Sarah Powell-Brett, Simon Anthony Fallis
Good Hope Hospital

Introduction

Engagement can be defined as a fulfilling, work-related state of mind characterised by vigour, dedication, and absorption. Successful engagement of foundation year (FY) doctors results in superior job performance and may promote recruitment to surgery.

Aim

To assess the engagement of FY doctors in the surgical department at a single-centre, identify scope for improvement and enhance engagement of FY doctors in surgery.

Methods

An anonymised survey was sent to FY doctors at the end of their surgical rotation at a district general hospital. Improvements were implemented and responses sought from the subsequent cohort for comparison.

Results

Results from the first cohort illustrated a lack of engagement with surgery. Only 38% had opportunities to attend theatre and clerk patients, 46% enjoyed their rotation, 30% felt like valued members of the team and 7% felt they received good quality surgical teaching. Remedial actions included establishment of theatre rotas, regular teaching, supervised FY-led ward rounds and supported clerking. Results from the second cohort showed significant improvement; 91% had opportunities to attend theatre and clerk, 82% enjoyed the rotation, 64% felt valued and agreed they received good quality teaching.

Conclusion

Simple interventions applicable to all surgical departments can result in enhanced engagement of FY doctors in surgery.

EVAR Offers a Survival Advantage to Patients Not suitable for Open Abdominal Aortic Aneurysm Repair

O. Fisher¹, Z. Gates¹, R. Benson^{1,2}, E. Parkes³, J. Shakespeare³, S. Goodyear^{1,4}, D. Higman¹, A. Mahmood¹, N. Matharu¹, D. Srinivasmurthy¹, S. Sayed¹ Christopher H E Imray^{1,5}

¹Department of Vascular Surgery, University Hospital of Coventry and Warwickshire

²University of Birmingham

³Department of Respiratory Physiology, University Hospital of Coventry and Warwickshire

⁴Worcestershire Royal Hospital

⁵University of Warwick

Introduction

Cardiopulmonary exercise testing (CPET) can be used to guide decision making for major vascular surgery. The EVAR 2 trial suggested EVAR in patients unfit for open repair failed to provide a survival advantage over conservative management. The aim of this study was to assess contemporary survival differences between patients with poor CPET measures undergoing EVAR or conservative management for AAA.

Methods

CPET results, surgical outcomes and survival for patients considered for elective AAA repair were interrogated. Anaerobic threshold (AT) of <11ml/min/kg was used to indicate poor physical fitness. All cause and aneurysm specific mortality for those undergoing EVAR compared to those not offered surgical intervention was considered.

Results

Between 2007-2017 data was available for 119 EVAR, and 65 non-operative patients. 37/119 (31%) of EVAR patients had an AT of <11ml/kg/min compared to 32/65 (49%) in the non-operative group. In Patients with an AT<11, EVAR conferred a survival advantage (mean survival 86 months vs 40 months, HR=0.21, CI=0.08-0.47, P<0.01). 18/119 (15%) EVAR patients required re-intervention at a mean time of 19 months.

Conclusions

EVAR provides a survival advantage in patients assessed as not fit for open aneurysm repair by CPET. Graft re-intervention rates are significantly improved over previously reported data.

A Virtual Surgical Clinic: A Service Evaluation

Georgia Layton¹, Stephanie Clarke¹, Samuel Hutchison¹, Simardeep Singh Sadhra¹, Salman Mirza¹

1. Walsall Healthcare NHS Trust

Aim

There are approximately 600,000 emergency admissions under the care of General Surgery annually in the UK. Various pathways have been implemented to reduce the burden of these admissions upon a financially-challenged National Health Service including managing acute presentations of disease in an outpatient setting. Our aim was to evaluate the safety and effectiveness of a Virtual Surgical Clinic (VSC) in our busy District General Hospital.

Method

All referrals are assessed by a senior clinician in the Surgical Assessment Unit. Patients not requiring an acute admission are investigated with radiological imaging within 72 hours, followed by review in the VSC. Data analysis of the prospective virtual clinic register was undertaken.

Results

Preliminary analysis shows that 298 patients were referred to the virtual clinic over a seven-month period (October 2016 to April 2017). 277 referrals between October 2016 and April 2017 were evaluated. 15 patients did not attend their imaging appointment. 6 patients were excluded due to incomplete medical admission records.

Common reasons for presentation were abdominal pain (82.3 %, n=228), scrotal pathology (8.3%, n=23) and groin lumps (3.2%, n=9).

65% (n=180) of patients underwent radiological imaging within 72 hours of request with 92.2% (n=166) of these scans also being reported within this time frame.

58.8%(n=163) underwent Ultrasound Scanning. 41.2% (n=114) underwent CT.

Readmission rate after virtual clinic review was 4.3% (n=12) due to on-going pain (50%, n=6), further investigation (16.7%, n=2) and procedural intervention (33.3%, n=4).

Conclusions

In conclusion, a Virtual Surgical Clinic resulted in fewer acute admissions with low complication, operation and re-admission rates. It is safe and effective for managing acute referrals in conjunction with dedicated radiological imaging support.

Improving the 'Abscess Pathway' at University Hospital North Midlands: A Quality Improvement Project

H Thursby (Academic Clinical Fellow in Urology, University Hospital North Midlands), W Ball (General Surgical Registrar, Royal Shrewsbury Hospital), T Athwal (Consultant UGI surgeon and Emergency Surgery Lead, University Hospital North Midlands).

An 'Abscess Pathway' has been in place for several years at UHNM allowing patients to be seen, assessed and if appropriate booked and consented for surgery. They then return the following morning to be first on the emergency theatre list, allowing discharge by early afternoon, meaning

they don't require an inpatient bed. This has not been reviewed since imposition and anecdotally, it was noted that more patients on this pathway were undergoing prolonged fasting periods and being cancelled at the 11th hour.

A review of the pathway looked at 6 months of data from patients undergoing incision and drainage on the abscess pathway. The time from admission to surgery, total length of stay, time in theatre and whether an inpatient bed was required were all looked at. Results were presented at governance meeting and suggestions for improvement were put into place, including a new way of booking. Re-audit was undertaken a year later.

The number of patients staying less than 24hours rose from 49% to 81% and the average time to theatre went from an average of 21hour to 16hours. This resulted in fewer cancellations and inpatient stays.

International, patient and outcome assessor blinded, randomised controlled trial of standard closure of stoma site versus prophylactic biologic mesh reinforcement

Reinforcement of Closure of Stoma Site (ROCSS) Collaborative and West Midlands Research Collaborative

Contact: Aneel Bhangu, University of Birmingham.

Word count: 199

Background: This trial aimed to assess whether biologic mesh safely reduced the incidence of incisional hernias at the stoma closure site.

Methods: Patients were randomised to either standard closure (sutured, non-mesh) or biologic mesh reinforcement. Patients and outcome assessors were blinded to allocation. The primary outcome measure was clinically detectable hernia two years post randomisation. A sample size of 790 patients was required to identify a 40% reduction in the herniation rate (from 25% to 15%) with 90% power (15% drop-out rate).

Findings: Between October 2012 and December 2015, 394 patients were randomised to mesh closure and 396 to standard closure from 36 centres across three countries. In the mesh group, 371/394 (94%) patients successfully received mesh and three patients received mesh in the control group. The clinically detectable hernia rate at two years was 12% (39/323) in the mesh group and 20% (64/327) in the no mesh group (adjusted relative risk 0.62, 0.43-0.90, p=0.012). There were no differences between groups in 30-day or 1-year wound infection or seroma rates.

Interpretation: Reinforcement of the abdominal wall with a biologic mesh at the time of stoma closure reduced clinically detectable incisional hernia at 24 months with an acceptable safety profile.

HYDratation and Bicarbonate to Prevent Acute Renal Injury After Endovascular Aneurysm Repair: Pilot/Feasibility Randomised Controlled Study

Saratzis¹, Chiocchia², Jiffry³, Hassanali², Singh², Imray CH³, Bown MJ⁴, Mahmood³.

Author information

1 NIHR Leicester Biomedical Research Centre, University of Leicester, Leicester, UK.

2 Oxford Surgical Intervention Trials Unit (SITU), Oxford University, Oxford, UK.

3 University Hospital Coventry and Warwickshire, Coventry, UK.

4 NIHR Leicester Biomedical Research Centre, University of Leicester, Leicester, UK.

Abstract

Background:

Up to 25% of elective endovascular aneurysm repair (EVAR) can result in acute kidney injury (AKI). This is associated with increased morbidity and mortality.

Methods:

A dual center pilot randomised controlled trial (RCT) designed. Both study groups received 10ml/kg of Hartmans solution (maximum 1L) prior to induction and then 2mls/kg/hr of Hartmans for the first 12 postoperative hours. In addition treatment group received 1 ml/kg of 8.4% sodium bicarbonate solution at induction. AKI is defined according to Acute Kidney Injury Network (AKIN) criteria. Further, feasibility for a large RCT was assessed.

Results:

58 patients (84% of those screened; age range 57-89 years, 10% female) were recruited, of these 30 received bicarbonate. Risk factors for AKI are comparable between the groups. 33% of patients in the control arm developed AKI compared to 7% in the intervention arm (as treated analysis). None of the patients receiving NaHCO₃ developed a serious related adverse event.

Conclusion:

High dose NaHCO₃ and hydration appears to prevent post EVAR AKI. A large RCT to confirm the efficacy of this intervention is feasible.

Perioperative immune function and pain control may underlie early hospital readmission and 90 day mortality following lung cancer resection: a prospective cohort study of 932 patients

Nicola Oswald^{1,2}, James Halle-Smith¹, Amy Kerr², Joanne Webb², Paula Agostini², Ehab Bishay², Maninder Kalkat², Richard Steyn², Babu Naidu^{1,2}

¹University of Birmingham, Birmingham, United Kingdom

²Department of Thoracic Surgery, Heart of England NHS Foundation Trust, Birmingham, United Kingdom

Background

Mortality following lung cancer resection has been shown to double between 30 and 90 days. The aim of this study was to describe the causes of both readmission and mortality. Following this, we aimed to identify modifiable factors associated with these adverse events.

Methods

This is a prospective cohort study conducted over 55 months at a tertiary thoracic surgery centre. Binary logistic regression identified factors associated with death within 90 days of surgery.

Results

The 30 day and 90 day mortality rates were 1.4% and 3.3% respectively. The most common causes of death were pneumonia, lung cancer and Acute Respiratory Distress Syndrome/Multi Organ Failure. Potentially modifiable risk factors for mortality were: Postoperative pulmonary complications (Odds ratio 6.1), preoperative lymphocyte count (OR 0.25), readmission within 30 days (OR 4.2) and type of postoperative analgesia (OR for intrathecal morphine 4.8). The most common causes of readmission were pneumonia, shortness of breath and pain.

Conclusions

Perioperative immune function, as portrayed by the occurrence of infection and lower lymphocyte count in the immediate perioperative period, and pain control method are strongly associated with 90 day mortality. Using findings from this comprehensive study, patient outcomes could be improved by modifying the identified risk factors.

Perioperative Outcomes of Two-Stage Ivor-Lewis Oesophagectomy: A Single Surgeon Series

Sivesh K Kamarajah¹, Pritam Singh¹, Jan Dmitrewski¹

1. Department of Upper Gastrointestinal Surgery, Queen Elizabeth Hospital Birmingham, UK

Introduction

Oesophagectomy is a complex surgical procedure, historically associated with high morbidity and mortality. This study sought to evaluate surgical outcomes after standard open Ivor-Lewis oesophagectomies for oesophageal cancers in the era of neoadjuvant chemotherapy (NAC).

Methods

All patients undergoing oesophagectomy by a single surgeon from 2003 - 2018 were identified from a prospectively collected database. Primary outcomes were rates of peri-operative anastomotic complications (leaks, tracheo-oesophageal fistula (TOF), conduit necrosis). Secondary outcomes were rates of strictures, chyle leaks, and in-hospital mortality. Stratified analyses by age (≥ 70 vs < 70 years old) and time period (2003-2010 vs 2011-2018) were performed to identify differences in clinicopathologic characteristics and impact on surgical outcomes.

Results

One hundred and seventy-two patients underwent two-stage oesophagectomies. 12(7%) had an associated splenectomy. Majority had T3/4 (n=107,62%) cancers and 119(69%) received NAC. Nine percent had peri-operative anastomotic complications (n=11 leaks: 3 of which had a TOF, n=4 conduit necrosis), 8(5%) developed anastomotic strictures and 4(2%) experienced chyle leak. In-hospital mortality was 2% (4 patients). Patients ≥ 70 years had lower rates of NAC (52% vs 78%, $p=0.001$) and higher rates of node-positive disease (59% vs 49%, $p=0.024$). There were higher rates of node-positive disease (56% vs 49%, $p<0.001$) and strictures (10% vs 1%, $p=0.023$) in the recent time period.

Conclusion

Whilst the rates of morbidity following open 2-stage oesophagectomies are significant, in-hospital mortality is low at 2%.

Mata-analysis of direct surgical vs endovascular revascularisation for Aorto-Iliac Occlusive Disease (AIOD)

Sobath Premaratne, Jeremy Newman, Simon Hobbs, Andrew Garnham, Mike Wall
Black Country Vascular Network

Abstract

Objective

We sought to compare outcomes following direct surgical (DS) vs endovascular/hybrid (EVH) revascularisation for AIOD.

Methods

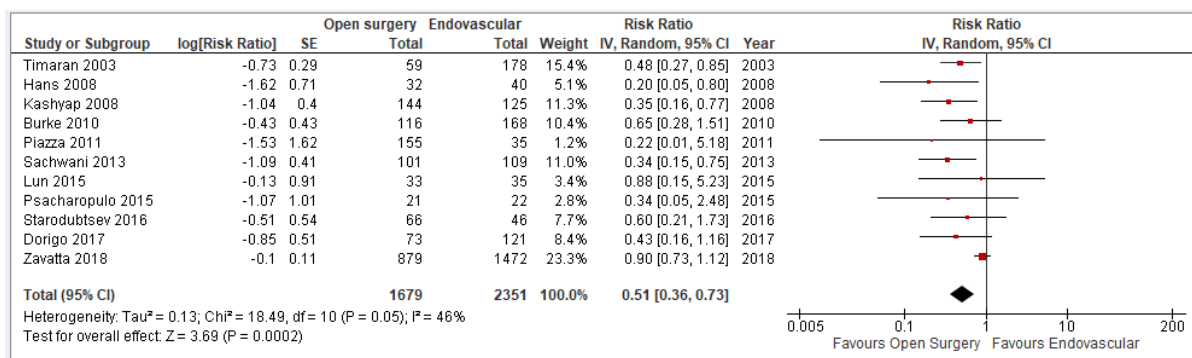
Pubmed, Embase searched for studies comparing DS vs EVH for revascularisation of AIOD from 2000–2018. Risk-bias assessed by two authors using MINORS. Kaplan-meier curves digitised using WebPlotDigitiser and Meta-analysis conducted with data generated by Excel tool. Patient demographics, presenting symptoms, co-morbidities, hospital-stay, 30d mortality and primary patency (PP) were compared.

Results

11 cohort studies identified comparing a population of 4030 patients. Average MINORS score was 18/24. 1679 had DS vs 2351 underwent EVH techniques. DS vs EVH groups were comparable for average age (61 vs 65), sex (males; 67% vs 66%), rest pain (27.2% vs 23.1%) and tissue loss (13.3% vs 20.1%). Smoking, diabetes and IHD in DS vs EVH groups were 65% vs 53%, 24% vs 35% and 32% vs 41%. Average hospital stay and 30d mortality for DS vs EVH were 9.5d vs 4.2d (p=0.34) and 2.7% vs 1.4% (p=0.68). There was moderate heterogeneity among studies (I²=46%). PP in DS group was significantly higher than EVH group (Hazard ratio 0.51; CI 0.60-0.85; p=0.0002).

Conclusion

Moderate quality studies show DS has significantly better primary patency compared to EVH when treating AIOD.



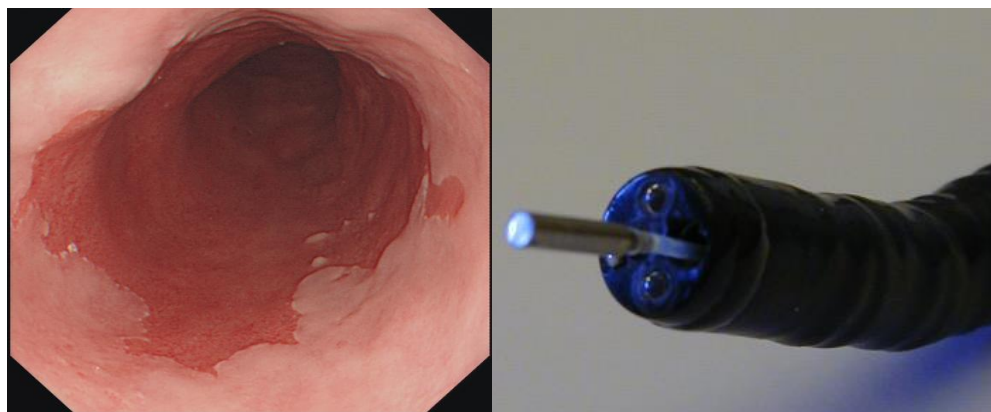
Raman Probes For *In Vivo* Identification Of Oesophageal Cancers

A. P. Dudgeon^{1,2,3,*}, M. S. Noormohamed¹, H. Barr¹, D. Megson-Smith³, C. A. Kendall^{1,2}, J. C. C. Day³, N Stone²

¹*Biophotonics Research Unit, Leadon House, Gloucestershire Hospitals NHS Foundation Trust, Gloucester, Gloucestershire, GL1 3NN*

²*Physics and Medical Imaging, College of Engineering, Mathematics and Physical Sciences, University of Exeter, Physics building, Stocker Road, Exeter, United Kingdom, EX4 4QL*

³*School of Physics, University of Bristol, Interface Analysis Centre, HH Wills Physics Laboratory, Tyndall Avenue, Bristol, BS8 1TL*



Abstract

Cancer diagnoses typically rely on an invasive biopsy for disease identification and staging. “Gold standard” histopathological analysis of tissue is slow, subjective, often leaves scarring and can lead to post-procedural complications. Oesophageal cancers are diagnosed in over 9000 people each year in the UK and is the fifth biggest killer.¹ We are developing novel devices for the minimally-invasive assessment of oesophageal lesions identified at screening. We shall demonstrate if our device can rapidly (<5 seconds) determine the tissue pathology of the oesophagus *in vivo*. We have previously demonstrated the concept of RS diagnosis of oesophageal disease *in vitro*.²

Our devices contain optical fibres able to deliver a low-power laser and collect the light scattered by tissue, using a technique called Raman Spectroscopy (RS), through the working channel of an endoscope (gastroscope). With this technique we can rapidly measure biomolecular changes that occur in tissue when cancer develops. By analysing the RS signal using multivariate analysis, trained with “gold standard” histopathology, we are able to provide an instant diagnosis of the suspect tissue, with minimal invasion and without surgical removal, allowing for cheaper, earlier treatment and a better patient prognosis. We present our work on an *in vivo* device.

References:

- 1 Cancer Research UK, Oesophageal cancer statistics, <https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/oesophageal-cancer>, (accessed 17 August 2018).
- 2 C. Kendall, N. Stone, et al., *J. Pathol.*, 2003, **200**, 602–609.

REVIEW ON PSOAS ABSCESS

ABSTRACT:

INTRODUCTION: Psoas abscess is a relatively rare condition that can present with vague/nonspecific symptoms and signs. Its insidious onset and occult characteristics can cause diagnostic delays, resulting in high morbidity and mortality. The majority of the literature is in the form of case reports and short case series. This study and review article brings together the available information to give an updated concise and systematic review of this rare diagnosis.**METHODS&RESULTS:** We undertook retrospective observational review of 26 patients admitted with psoas abscess over 10 year period from February 2007 to April 2017 at Russell's hall hospital in Dudley. In our study the most common cause for psoas abscess was secondary due to gastrointestinal origin (30%) closely followed by renal (23%) and primary cause due to haematogenous or lymphatic route from distant site (23 %).All patients in the series received broad spectrum antibiotics.USS and CT was the most common diagnostic modality used. Majority of patients were treated successfully with percutaneous drainage 61 %(USS guided 38.4 %, CT guided 23 %).**DISCUSSION:** Treatment options vary depending on the cause and size of the psoas abscess. They include treatment with (1) antibiotics alone (2) percutaneous drainage by USS or CT (3) Open surgery.Percutanous drainage has become the first line of treatment as shown both in literature review and in our study.

Authors:

1. Mr Ganesh Kumar Rajendran (Surgical Registrar)
2. Mr Rajan Kumar Patel (Consultant Surgeon)

Address:

Department of Colorectal Surgery
Russell's Hall Hospital, Dudley
West Midlands DY1 2HQ

Single- vs dual-antiplatelet therapy in carotid endarterectomy – what is the evidence?

Bura K, Goh YL, Shawish E

Introduction

There are no recommended guidelines in the use of single versus dual-antiplatelet therapy and type of antiplatelet agent in reducing the risk of post-operative bleeding following carotid endarterectomy (CEA). This study reviews the bleeding risk following CEA at a DGH.

Methods

The number of CEA procedures was retrospectively analysed from January 2013 to December 2017. Data included patient demographics, imaging modality, number and type of antiplatelet agents, time from presentation to surgery and post-operative complications. Statistical analysis was performed using SPSS.

Results

The database revealed 195 CEAs performed, mean patient age was 71.8 years. Pre-operative imaging was predominantly carotid ultrasound (97.9%) with concurrent brain imaging of CT (73.8%) and MRI (12.3%). Post-operative complication rate was in 45 (23.1%) cases, most were hypoglossal nerve injury (5.6%), bleeding (4.6%) and stroke (4.1%). No bleeding complications associated with patients taking aspirin only, Aspirin retard, warfarin or NOAC. Bleeding risk is statistically significant with the combined aspirin and clopidogrel group when compared with clopidogrel alone ($p=0.037$). No statistical significance was demonstrated between anticoagulant agents and post-operative strokes.

Conclusion

Patients on dual antiplatelets have higher bleeding rates but no peri/post-operative stroke risk when compared to other groups. Limitations of this study is the small retrospective cohort of patients being studied.

Systematic review of therapeutic nipple-sparing *versus* skin-sparing mastectomy

Authors: Yasser Al Omran^a, Riaz A. Agha^b, Georgina Wellstead^c, Harkiran Sagoo^d, Ishani Barai^e, Shivanchan Rajmohan^e, Mimi R Borrelli^f, Martinique Vella-Baldacchino^g, Dennis P Orgill^h, Jennifer E. Rusbyⁱ

Contact person: Yasser Al Omran

Institutions: a – University Hospital of North Midlands, Stoke-on-Trent, UK, b – Department of Plastic Surgery, Queen Victoria Hospital, East Grinstead, UK, c - Barts and The London School of Medicine and Dentistry, Queen Mary and Westfield University, London, UK., d – GKT School of Medical Education, King's College London, London, , e - Imperial College School of Medicine, London, UK, f – Division of Plastic Surgery - Stanford University, Stanford, CA, USA, g - Oxford University Hospitals NHS Foundation Trust, Oxford, UK, h – Division of Plastic Surgery, Brigham and Women's Hospital, Boston, MA, USA., i – Breast Surgical Unit, The Royal Marsden NHS Foundation Trust, Sutton, UK

Abstract

Background

The use of nipple-sparing mastectomy (NSM) is increasing, despite unproven oncological safety in the therapeutic setting. The aim of this systematic review was to determine the safety and efficacy of NSM as compared with skin-sparing mastectomy (SSM).

Methods

A literature search of all original comparative studies including randomized controlled trials, cohort studies and case-control studies comparing women undergoing therapeutic NSM or SSM for breast cancer was undertaken. Primary outcomes were oncological outcomes and secondary outcomes were clinical, aesthetic, patient-reported and quality of life outcomes.

Data analysis was undertaken to explore the relationship between NSM and SSM, and pre-selected outcomes. Heterogeneity was assessed using the Cochrane Tests.

Results

Six-hundred and ninety articles were identified, of which 14 were included. There was no statistically significant difference in 5-year disease free survival and mortality for NSM and SSM groups, where data was available. Local recurrence rates were also similar between NSM (3.9%) and SSM (3.3%) groups with no significant difference ($p=0.75$). NSM had a partial or complete nipple necrosis rate of 15%, and a higher complication rate than SSM (23.5% *versus* 13.1%). The higher overall complication rate was due to nipple necrosis and a higher rate of mastectomy skin flap necrosis rate (4.7% *versus* 3.9% for SSM).

Conclusion

In carefully selected cases, NSM is a viable choice for women with breast cancer needing to undergo mastectomy. More research is needed to help further refine which surgical approaches to NSM optimise outcomes.

The Applications of Colorectal Tumour Derived Organoids – The Birmingham Experience

Wanigasooriya, K., Silva, J., Stodolna, A., Stockton, J., Hallam, S., Tyler, R., Pestinger, V., Hoare, R., Ismail, T. and Beggs, A

Introduction

Organoids are three-dimensional tissue constructs derived from tumour or normal tissues. Organoids are superior to cell lines in the in-vitro analysis of tumour biology. We have successfully cultured primary organoid lines from human normal colon, colorectal tumours (resection specimens as well as biopsies), colorectal polyps and colorectal metastases (liver and peritoneal).

Aims and Objectives

To create an organoid repository of colorectal tumours and metastases. Demonstrate maintenance of tumour heterogeneity within organoid cultures after exposure to intervention (e.g. radiotherapy). Identify common mutations through next-generation sequencing.

Methods

Patients undergoing diagnostic endoscopic procedures and colorectal cancer (CRC) resection surgery prospectively recruited. Successfully cultured organoid lines irradiated. Sequencing to identify common mutations. Single cell sequencing performed to assess tumour heterogeneity before and after irradiation.

Results

We have successfully developed 14 colorectal tumour organoid lines (8-CRC tumours, 4-CRC liver-metastases, 1-peritoneal metastasis and 1-normal colon). Panel sequencing identified the commonest mutant genes to be APC, TP53, ATM and MLH1 within 7 of the above lines. Single cell sequencing demonstrated progressive dysregulation of the mTOR signalling pathway when exposed to radiotherapy.

Conclusion

Organoids from colorectal tumours are genetically stable bio-repositories which facilitate the study of key biological properties of tumours and their response to intervention. Radiosensitivity may be enabled by using AKT/mTORC blockade.

The comparison of recurrence rate after different modalities of treatment for sacral pilonidal sinus (Excision with lay open and primary closure) and the contributing factors.

Mr Amaar Aamery (Senior Clinical Fellow-General Surgery)

Dr Saleem Malik (Core Trainee-General Surgery)

Dr Wai Tung Chan

Mr Deepak SINGH-RANGER (Consultant Surgeon)

New Cross Hospital/ The Royal Wolverhampton NHS Trust

Introduction:

Pilonidal sinus (PNS) disease and abscess are common and likely to occur in Caucasian hirsute obese males aged 15–40 years. Our aim was to investigate if previous pilonidal abscess influences recurrence following pilonidal sinus surgery.

Method:

A retrospective collection of patients undergoing PNS surgery from 2012 to 2016. Information obtained included age, gender, BMI, co-morbidities, previous pilonidal abscess and surgical approach to PNS. Patients were classified into 'Recurrence' and 'No Recurrence' and compared.

Results:

159 patients underwent pilonidal sinus excision, 113 were males.

150(95%) were under 45 years; 90 (57%) had a BMI> 24.9 and 57(36%) were smokers.

20 (19%) out of the 105 for lay open had recurrence of which 11 (55%) had undergone pilonidal abscess drainage (PAD). Of the 52 for primary closure 11 (21%) had recurrence and 3 (27 %) underwent previous PAD.

Conclusion:

The surgical approach to pilonidal sinus disease is not influenced by previous pilonidal abscess drainage

Preliminary assessment of a large national database investigating factors influencing the effect of gender on outcomes after lower limb bypass.

Benson RA^{1,2}, Lasserson D², Imray CH^{1,3}, Bradbury AW^{2,4}

1. Department of Surgery, University Hospitals Coventry and Warwickshire NHS Trust, Coventry, West Midlands, UK.
2. University of Birmingham, Birmingham, UK
3. Warwick Medical School, University of Warwick, Coventry, West Midlands, UK
4. University Department of Vascular Surgery, Heart of England NHS Foundation Trust, Birmingham, United Kingdom

Objective:

Operative outcomes after lower limb bypass are frequently reported as worse for female patients compared to their male counterparts. This study aimed to define the interaction between gender and other variables related to lower limb bypass.

Methods:

A retrospective analysis of a prospective national database from January 2014 to December 2016 was performed. Patients undergoing endarterectomy, or aged ≤ 40 years were excluded.

Results:

Over a three year period, 16,666 bypasses were recorded (12,157 men, 4,509 women). Female gender was independently associate with age (70.5 vs 68.1, $p < 0.01$) and emergency presentation (F:40% vs M:36%, $p < 0.001$). Were were also more likely to present with critical limb ischaemia (F:75% vs M:67% $p < 0.001$). 5.5% of women vs 4.1% of men developed respiratory complications post-operatively ($p < 0.001$). Treatment was more likely to be complicated by limb ischaemia (7% vs 5.7%, $p < 0.001$), and subsequent major amputation (1.5 vs 1.1% ($p = 0.04$)). Female gender was associated with increased mortality before discharge (3.9% vs 2.6%, $p < 0.001$).

Conclusions:

Factors linking gender to post-operative outcome include several key pre-operative factors including more emergent presentation, and greater ischaemic burden. This suggests that in order to ensure equivalent operative risk, investigation of the pre-hospital pathway is required.

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