Improving our patients’ outcomes after hernia surgery

2nd & 3rd November 2020
Online virtual conference
Dear British Hernia Society members and virtual delegates

It is a privilege to welcome you to this virtual conference. At the time of writing, we have had over 500 delegates registered from all over the world. As you know, the Board of the BHS had planned a traditional ‘face to face’ meeting at the new International Conference Centre, Newport, South Wales. The city of Newport is sorry that you were not able to visit in person; but maybe you could visit in the future. The Romans did so in the fourth century (we have the largest most western amphitheatre in Europe) but visitors are treated more favourably now as exemplified by the Ryder Cup in 2010 and the NATO summit in 2014.

As you will see from our conference programme we have many well known International speakers and we are grateful to them and our industry sponsors for their support in these challenging times. Although the conference will be run on a virtual platform we aim to run the meeting as if it were a “face to face” one. In addition to authoritative lectures we have slots for free paper sessions on Day 1 and Trainee Prize presentations on Day 2. Many other accepted abstracts are published in this PDF. Our virtual platform allows us to run audience ‘questions’ or ‘polls’ and the chair of each session will let you know if this is the case. We also plan to record the conference, which will be available later as an educational library for on demand access.

Finally the clues to the BHS quiz, a shorter one than usual, are printed on the next page which you will need to mark yourselves ... honestly!

With best wishes

Brian M Stephenson
David L Sanders
Local organizers of the 11th BHS meeting
Liam Horgan
President of the BHS
These are slides of 15 cases managed during my 25 years in South Wales; 1 point for a correct answer (Question 5 has two points) so maximum is 16.

Good luck!

1. 3 weeks of swelling 3 years after RIH repair
2. Why so red?
3. What happened here?
4. An unusual parastomal hernia; but why?
5. Arrested and accused of ……? What operation did he have?
6. Often itching in spotty children ….
7. Three previous repairs; but why?
8. Yet another recurrence …?
9. Too much cholesterol ….
10. An underlying problem….
11. After lots of coughing …..
12. Mastectomy
13. What is the diagnosis?
14. O my God… what is shown here?
15. After a baby in a hurry …
DAY 1: MONDAY 2ND NOVEMBER

From 0845
Online registration/login to platform
Opening address
Chairs: Brian Stephenson, David Sanders, Liam Horgan

0900 Welcome from the organisers
Brian Stephenson & David Sanders

Session 1: Primary Ventral Hernia
Chairs: Aali Sheen, John Findlay & Harsha Jayamanne

0910 Top tips: anatomy of the abdominal wall
Yohann Renard, France

0930 How to manage a ventral hernia when there is also a divarication?
Cesare Stabilini, Italy

1000 Ventral Hernia Guidelines – when to use a mesh
Nadia Henriksen, Denmark & Agneta Montgomery, Sweden

1030 Panel discussion and questions from the audience

1050 INDUSTRY SYMPOSIUM
BD Bard - Long term resorbable mesh in AWR and Hiatal Hernia Repair.
(Supported by long term data and clinical experience)
J. Scott Roth, USA

1120 Break

Session 2: Free paper session 1
Chairs: Andrew de Beaux & Duncan Light

1130 FP1 Quality of life following primary parastomal hernia repair: a pilot study
Katherine Barrett

1140 FP2 Safety of using mesh in repair of strangulated groin hernia requiring bowel resection: a systematic review and meta-analysis
Tanzeela Gala

1150 FP3 A National Survey of Hernia Services and Surgeons: Review of Current Practices Within the UK in association with the British Hernia Society
Tom Grove

1200 FP4 Small Bites Technique for Closure of Emergency Laparotomy
Jane Hornsby

1210 FP5 A systematic review of outcome reporting in incisional hernia surgery
Christophe Thomas

1220 Comparison Of Inguinodynia in patients undergoing prophylactic Ilioinguinal neurectomy vs no neurectomy in Lichtenstein mesh hernioplasty.
Zeeshan Zafar Hashmi

1230 Break

1300 INDUSTRY SYMPOSIUM
BBraun - Subcostal incisional hernia repair made easy
Andrew de Beaux, UK

1315 Break
## Session 3: Inguinal hernia

**Chairs:** Brian Stephenson, Stella Smith & Dermot Hehir

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<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>1330</td>
<td>The surgeon as a prognostic factor</td>
<td>Barbora East, Czech Republic</td>
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<td>1350</td>
<td>How to assess post herniorraphy groin pain</td>
<td>Maciej Pawlak, UK</td>
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<tr>
<td>1410</td>
<td>How to treat post herniorraphy groin pain</td>
<td>David Chen, USA</td>
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<tr>
<td>1430</td>
<td>Panel discussion</td>
<td>Barbora East, Maciej Pawlak &amp; David Chen</td>
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### INDUSTRY SYMPOSIUM

**Medtronic - Data driven incisional hernia repair**

Nadia Henriksen, Denmark

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<tr>
<td>1530</td>
<td><strong>INDUSTRY SYMPOSIUM</strong></td>
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<td>1600</td>
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## Session 4: Keynote Lecture

**Chairs:** Liam Horgan & Andrew Kingsnorth

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<th>Time</th>
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<tr>
<td>1630</td>
<td>Top tips in hernia surgery: How to make our patients outcomes better</td>
<td>David Chen, USA</td>
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<tr>
<td>1710</td>
<td>Panel discussion</td>
<td>David Sanders, David Chen, Al Windsor, Liam Horgan &amp; Andrew Kingsnorth</td>
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## Day 2: Tuesday 3rd November

### INDUSTRY SYMPOSIUM

**AMS - Staying Ahead of the Curve with Atraumatic Hernia Mesh Fixation**

Paul Wilson, UK

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<tr>
<td>0815</td>
<td><strong>INDUSTRY SYMPOSIUM</strong></td>
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<tr>
<td>0900</td>
<td>Presidential Address and BHS Registry</td>
<td>Liam Horgan</td>
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<tr>
<td>0920</td>
<td>Should surgeons repair symptomatic, clinically occult, radiologically evident (SCORE) inguinal hernias? A case-control study of patient-reported outcomes</td>
<td>Barnaby Farquharson</td>
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<tr>
<td>0928</td>
<td>The development and validation of risk stratification models for short-term outcomes following contaminated complex abdominal wall reconstruction</td>
<td>Jonathan Hodgkinson</td>
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<td>0936</td>
<td>A Qualitative Investigation of the Quality of Life (QoL) domains important to Patients with Complex Abdominal Wall Hernia (CAWH) – the initial analysis.</td>
<td>Olivia Smith</td>
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<td>0944</td>
<td>Exploration of variation in Management of Acutely Symptomatic Hernia – results from the MASH practice survey.</td>
<td>Olivia Spence</td>
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<td>0952</td>
<td>The experimental methodology and comparators used for in vivo hernia mesh testing; a ten year scoping review</td>
<td>Thomas Whitehead-Clarke</td>
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<td>1000</td>
<td>Break</td>
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### INDUSTRY SYMPOSIUM

**WL Gore - Current status of CAWR in the UK**

Dominic Slade, UK

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<tr>
<td>1010</td>
<td><strong>INDUSTRY SYMPOSIUM</strong></td>
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### Session 6: Incisional Hernia

**Chairs:** Oroog Ali & David Sanders

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<th>Time</th>
<th>Topic</th>
<th>Presenter(s)</th>
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<tr>
<td>1030</td>
<td>What to do before you operate</td>
<td>Sam Parker, UK</td>
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<tr>
<td>1050</td>
<td>Disasters in incisional hernia repair and how to avoid them 1?</td>
<td>Al Windsor, UK</td>
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<tr>
<td>1110</td>
<td>Disasters in incisional hernia repair and how to avoid them 2?</td>
<td>Dominic Slade, UK</td>
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<tr>
<td>1130</td>
<td>Managing loss of domain – Botox</td>
<td>Frederik Berrevoet, Belgium</td>
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<td>1150</td>
<td>Managing loss of domain – component separation</td>
<td>Marc Miserez, Belgium</td>
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<tr>
<td>1210</td>
<td>Managing loss of domain – peritoneal flaps</td>
<td>Andrew de Beaux, UK</td>
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<tr>
<td>1230</td>
<td>Panel discussion</td>
<td>Sam Parker, Al Windsor, Dominic Slade</td>
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**INDUSTRY SYMPOSIUM**

**Medtronic - Optimising the day case patient journey for inguinal hernia repair**

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<tr>
<td>1300</td>
<td>INDUSTRY SYMPOSIUM</td>
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<td>1330</td>
<td>Break</td>
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<tr>
<td>1350</td>
<td>BHS Quiz with honest personal marking!</td>
<td>Brian Stephenson</td>
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### Session 7: Complex Cases

**Chair:** David Sanders

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<th>Time</th>
<th>Topic</th>
<th>Presenter(s)</th>
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<tr>
<td>1420</td>
<td>Panel discussion: Complex cases: what would you do?</td>
<td>Salvador Morales Condes, Frederik Berrevoet, Andrew de Beaux, Wolfgang Reinpold &amp; Dominic Slade</td>
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### Session 8: Outcomes

**Chairs:** Liam Horgan & Praminthra Chitsabesan

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<th>Time</th>
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<tr>
<td>1510</td>
<td>Core outcomes in ventral hernia</td>
<td>Sam Parker, UK</td>
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<tr>
<td>1530</td>
<td>Reporting Outcomes in hernia surgery</td>
<td>Neil Smart, UK</td>
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<td>1550</td>
<td>Delphi results</td>
<td>Michael Wilson, UK</td>
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<td>1600</td>
<td>Patient perspectives – what outcomes should we measure</td>
<td>Sue Blackwell, UK</td>
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<tr>
<td>1620</td>
<td>Panel discussion and questions from the audience</td>
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<tr>
<td>1640</td>
<td>Prize Announcements and close</td>
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**SUE BLACKWELL**

Sue Blackwell is an experienced PPI representative, with a particular interest in PROMS and parastomal hernia. She is the Co-Chief Investigator on the PROPHER study, an international prospective cohort study on parastomal hernia treatment. She is also the first patient to receive a research grant from the Bowel Disease Research Foundation for the PAPooSE study looking at patient experiences of pregnancy following stoma formation.

She sits on the TSC for ROSSINI2, the first surgical MAMS RCT, and ACCURE 2 an RCT investigating at Appendectomy for Ulcerative Colitis. She is on the TMG for LaCeS 2, looking at laparoscopic versus open surgery in emergency colorectal surgery. She is also a member of the Patient Liaison Group of ACPGBI and the PPI rep on the ESCP Cohort Studies Committee. In her day job she is the Digital Marketing Manager for a Dispensing Appliance Contractor.

**ANDREW DE BEAUX**

Andrew de Beaux has been a Consultant Upper GI and General Surgeon at the Royal Infirmary of Edinburgh, UK since 2001. He graduated MBChB from the University of Aberdeen in 1988 and obtained his MD from the University of Edinburgh in 1998. His main surgical interest is abdominal wall reconstruction, in addition to bariatric surgery and emergency surgery. He is a Fellow of the Royal College of Surgeons of Edinburgh, and he has represented this College on the Council of SIGN (Scottish Intercollegiate Guidelines Network) since 2006. He is the retiring President of the British Hernia Society and is a current Board member (responsibility for social media) with the European Hernia Society. He is a Section Editor for the Journal Hernia, as well as an Editorial Board member for the BJS, WJS and Obesity Surgery. He has published many articles in peer-reviewed journals, as well as numerous book chapters in addition to serving on a number of hernia related guidelines.

In his free time, Andrew enjoys his family along with cycling, skiing, the great outdoors, English wine, Scottish whisky (no ‘e’ or he gets annoyed), aeroplanes, gardening, embroidery…

**OROOG ALI**

Miss Oroog Ali is a specialist registrar in general and colorectal surgery based in the North East of England. She has a keen interest in education and training conducting national surgical courses, conferences and training days. She is a surgical mentor to students and trainees and has obtained the NHS Leadership Academy Award with a completed degree in medical education. She is part of the executive committee for the Association of Surgeons in Training and has detailed experience of the surgical training environment.

Oroog has been involved in laparoscopy and hernia surgery training as part of charity trips in Tanzania. She also has presented work in the management of complex abdominal wall hernia in meetings. In her role as the BHS trainee representative she hopes to promote views of trainees around hernia care and develop training resources on operative techniques.
FREDERIK BERREVOET

Professor Dr F Berrevoet obtained his medical degree at Ghent University after which he received his surgical training at the University Hospital in Ghent, University Hospital Saarland, Homburg, Germany and Albert Schweitzer Hospital in the Netherlands. He started as a fellow at the Department of General & HPB and Transplantation Surgery at the University Hospital Ghent in 2004 after which he became a consultant in this department in 2006. He has recently been appointed Head of the Department for General and HPB Surgery and Liver Transplantation and Procurement.

He received the degree of doctor in Medical Science with his public defence of the thesis with the title ‘Progress in synthetic material in abdominal wall repair’ in September 2010 and he obtained the European Board of Surgery qualification in Hepato-biliary and pancreatic surgery in Zurich, Switzerland in December 2010.

Clinically he participated as a primary investigator in more than 50 national and international multi-centre surgical trials in the field of abdominal wall and HPB Surgery, and he has published more than 100 papers in his domain over the years and has presented more than 300 times at national and international meetings.

Professor Dr F Berrevoet is a board member of the Scientific Advisory Committee and Belgian National Representative of the European Hernia Society, past President of the Belgian Section of Abdominal Wall Surgery and board member of the Belgian Section of HPB, as well as a member of the Scientific Committee of the European HPB Association and a member of the Educational Committee and Belgian Representative for the European Union of Medical Specialists. He is also reviewer for many scientific journals in his field and Associate (subject) editor for the Journal Hernia, the Acta Chirurgica Belgica and the International Journal of Abdominal Wall and Hernia Surgery.

DAVID CHEN

David Chen, MD, a fellow of the American College of Surgeons and Professor of Clinical Surgery at the David Geffen School Medicine at UCLA, is the Director of the Lichtenstein Amid Hernia Institute. He was directly trained by Dr. Amid in modern Lichtenstein technique, complex hernia management and repair, and operative remediation of hernia pain. He is an international expert in open, laparoscopic, and robotic techniques for complex hernia repair, abdominal wall reconstruction, and foregut and hiatal hernia surgery, with an emphasis on post-operative chronic pain. He is recognized as one of the preeminent leaders in the field through his clinical experience, research, lectures, and publications on hernia repair and chronic pain after hernia surgery with over 250 lectures and live surgeries, 53 peer reviewed publications and 44 book chapters. He is the current president-elect of the Americas Hernia Society and serves on the editorial boards of several journals. Dr. Chen is focused on treatment, education and research for repair of hernias, advanced minimally invasive techniques for abdominal wall reconstruction and hernia repair, repair of diaphragmatic and hiatal hernias, and surgery for chronic pain, mesh complications, and nerve entrapment.
BARBORA EAST

Barbora is currently in a sabbatical post as Clinical Surgical Fellow at the Royal Infirmary of Edinburgh, Scotland. Her main surgical interest is abdominal wall reconstruction, (in addition to elective and emergency general surgery) undertaken in the National Health Service. She holds a Consultant Surgeon position at Motol Hospital, and is a lecturer at Charles University, Prague. She is on the board of Czech Young surgeon’s society and in 2019 became a member of the advisory wing of the EHS Board with responsibility for the web site. She is a co-secretary of the UEMS Abdominal Wall Section Executive Committee.

PRAMINTHRA CHITSABESAN

Praminthra Chitsabesan is a Laparoscopic Colorectal and General Surgeon with specialist experience in Cancer, Pelvic floor disease and Abdominal wall reconstruction. He completed his training in the North-Eastern Deanery and then a fellowship in Basingstoke as a Laparoscopic and Advanced Malignancy Open Colorectal Fellow. He is currently the Colorectal Lead for Humber Coast and Vale Cancer Alliance.

He did his PhD on clinical training and served as a Core training Facilitator for the Yorkshire and Humber Deanery for five years. He is joint Co-Director for the Yorkshire Colorectal and Abdominal wall reconstruction Cadaver Courses.

He is interested in enhanced recovery as well as prehabilitation and the identification of frailty phenotypes and their impact on surgery. He is an Honorary Senior Clinical Lecturer at Hull York Medical School and a reviewer for the journal Hernia.

He is part of the York Abdominal Wall Reconstruction team, who have presented in various international meetings. The team includes plastic surgeons and a MD thesis student who is currently investigating the quality of life in these complex patients and are conducting material science research with the University of York.

JOHN FINDLAY

John is a Consultant Upper GI and Abdominal Wall Surgeon at North Devon District Hospital. He qualified from the University of Nottingham in 2007, awarded a First Class Honours BMedSci for research in molecular genetics and BMBS with honours.

He trained in surgery in Oxford, and was appointed as a Consultant in North Devon in 2019. His particular clinical interests are gastro-oesophageal reflux disease and hiatus hernias, oesophageal dysmotility, laparoscopic hernia surgery and complex abdominal wall surgery.

John’s doctoral and post-doctoral research at the University of Oxford focused on augmenting clinical decision-making in Upper GI Surgery using sophisticated modelling and machine learning of high resolution datasets, decision theory, and evidence-based surgery. He received his PhD for genomics and clinical informatics at the Wellcome Trust Centre for Human Genetics and the Department of Oncology, and was an Honorary Clinical Lecturer in Surgery, NIHR Oxford Biomedical Research Centre Senior Clinical Research Fellow in Oesophagogastric Informatics, Lecturer in Clinical Medicine at Corpus Christi College, and Surgical Tutor at the University of Oxford.

John has been awarded 12 international and national research prizes, published more than 60 peer-reviewed papers and book chapters, given over 60 international and national presentations and lectures, and is a Senior Editor at the International Journal of Clinical Practice. His current research focusses on improving clinical outcomes, processes and decision-making in Upper GI and abdominal wall surgery.
NADIA HENRIKSEN

Nadia Henriksen is a surgical resident at Zealand University Hospital, Denmark. Nadia has a special interest in hernia repairs and abdominal wall reconstruction. Nadia is a member of Danish Hernia Database steering committee and has published more than 30 original papers in peer-reviewed journals. Nadia has participated in the creation of guidelines for the European Hernia Society and was responsible for the work with the recently published guideline on treatment of primary ventral hernias.

LIAM HORGAN

Liam Horgan is a laparoscopic upper gastro-intestinal surgeon working in Northumbria Healthcare NHS FT, with a special interest in day case hernia and gallbladder surgery. He is the president of the British Hernia Society and over the past 2 years he has worked to: establish a national Hernia Registry; to increase collaboration with Irish surgeons; to professionalise the British Hernia Society; and to improve outcomes for patients.

He formed and directs the NUGITS group, which is one of the leading teams of laparoscopic surgeons in the UK and recognised as a centre of excellence in Teaching and Training. His main interests include all forms of hernia, simple to complex recurrent incisional hernias, robotic surgery, laparoscopic gallbladder and bile duct surgery, laparoscopic anti-reflux surgery, emergency laparoscopic surgery, laparoscopic training and proctoring, human factors and patient safety and operating theatre efficiency. He has spoken at meetings nationally and internationally and published on these areas.

He also leads a long term voluntary commitment to support general surgery and hernia surgery and has established a laparoscopic training program and service provision in Kilimanjaro Christian Medical Centre, Moshi, Tanzania since 2003. Liam and his team won the prestigious BMJ Surgical Team of the Year 2014 for this work.

HARSHA JAYAMANNE

Harsha qualified from University of Kelaniya in Sri Lanka and after basic training there, moved to the UK to continue higher surgical training in South Wales. He currently work as a SAS doctor in General Surgery in Aneurin Bevan University Health Board, Newport. He has a heavy commitment to emergency surgery and is an enthusiast of abdominal wall repair and groin hernia surgery.

He has presented at both National and International meetings and has a number of publications in the field of hernia surgery. In 2016 he organised a successful local anaesthetic Hernia workshop for Sri Lankan surgical trainees, collaborating with the charity Hernia International and the College of Surgeons Sri Lanka.
DUNCAN LIGHT

Duncan Light is a Consultant in benign upper GI and hernia surgery in the Northumbria Healthcare Trust. He trained in the North East of England and undertook a post CCT fellowship in the Royal Infirmary of Edinburgh. He has published a number of papers in the field of hernia surgery and has presented at the AHS, EHS and BHS meetings.

He recently undertook an EHS supported travel fellowship to Berlin and Hamburg in 2018.

Duncan has an interest in surgical education and has recently completed a postgraduate MSc in medical education. He has been involved in teaching hernia surgery in charity missions to India and Tanzania.

MARC MISEREZ

Marc Miserez is Professor of Surgery and Head of Clinic in the Department of Abdominal Surgery at the University Hospitals of the Katholieke Universiteit Leuven, Belgium.

He has a specific interest in abdominal wall surgery, paediatric abdominal surgery, and training in laparoscopic surgery.

He is Past-President of the European Hernia Society (EHS) and the Belgian Association for Paediatric Surgery BELAPS. He is Fellow of the Royal College of Surgeons (Glasgow), Honorary Member of the Asia Pacific Hernia Society and Founding President of the Belgian chapter of the EHS.

Between 2011 and 2018 he was European Editor-in-Chief of Hernia, the World Journal of Hernia and Abdominal Wall Surgery.

He co-authored around 100 peer reviewed publications.

SALVADOR MORALES-CONDE

Salvador is Chief of the Unit of Innovation in Minimally Invasive Surgery of the University Hospital “Virgen del Rocío” and Head of the General, Digestive and Laparoscopic Surgery Unit at the Hospital QuirónSalud Sagrado Corazón in Sevilla (Spain). He is also Associate Professor of the Department of Surgery at the University of Sevilla (Spain).

Salvador is President Elect of the Spanish Association of Surgeons (AEC) and of the European Association of Endoscopic Surgeons (EAES). He is General Secretary of the European Hernia Society (EHS) (2014-2020), Vice-Chairman of the Chapter of Abdominal Wall surgery of the UEMS and Director of the Training program of endoscopic surgery of the Spanish Association of Surgery. He is also President of the Expert Committee of the Royal College of Medicine of Sevilla (from 2018).

He is Visiting Professor of the School of Medicine at the Northwestern National University (Argentina) and Visiting Professor of the Training program of Surgery of Malta. He is also on the Faculty of the IRCARD/EITS in Strasbourg (France) and in Barretos (Brazil) and the Italian School of Abdominal Wall Surgery, an Academic Fellow of the Royal Academy of Medicine of Sevilla and Lugo (Spain) and an Honorary member of the Society of Surgery of Cuba, Venezuela and Club Hernié (French Society of Abdominal wall).
AGNETA MONTGOMERY

Agneta is senior consultant at the Department of Surgery at Skåne University Hospital, Malmö, Sweden and Associate Professor at Lund University. She has worked on the development of laparoscopic and abdominal wall surgery since 1990 and has been head of the “Division of laparoscopic and abdominal wall surgery” since 1996. She has been principle mentor for the thesis of 8 research students, secondary mentor for 3 research students and 3 ongoing thesis projects. She has 123 original publications and 16 book chapters.

Agneta is former president and one of the founders of the Swedish Laparoscopic Society, former educational secretary of the Swedish Surgical Society and former President of the Swedish Surgical Society for four years. She is Board member of the Swedish Hernia Register and one of the founders of the Swedish Ventral Hernia Register. She is also former associate editor of Journal Hernia and part of several international guidelines on hernia.

She has been a Board member for several years and is currently President of the European Hernia Society (EHS) and member of the BJS council.

SAM PARKER

Sam Parker gained a Masters in Chemistry at Oxford University before studying Medicine. He completed the fast track post-graduate programme at Cardiff University and graduated with a merit in 2010. Since then he has been working as a junior surgical trainee in North Central London and currently is taking time out of surgical training to complete a PhD in Abdominal Wall Reconstruction at University College London. His work is mainly focusing on prognostic modelling for ventral hernia recurrence, as well as working on a number of other projects within the ventral hernia domain. His supervisors are Professor Steve Halligan, a gastrointestinal radiologist, and Mr Alastair Windsor, a colorectal and abdominal wall surgeon. His research has managed to secure government funding through the NIHR’s Research for Patient Benefit Programme. Commercial funding has also been secured from Allergan Plc, Dublin, Ireland.
MACIEJ PAWLAK

Maciej Pawlak is a Consultant Upper GI and Abdominal Wall Surgeon with specialist clinical interests in abdominal wall reconstruction and minimally invasive hernia surgery, and academic interests in medical research, the use of modern technologies in guideline implementation, as well as cooperation between surgeons on social media platforms and its potential influence on education.

He qualified from the Medical University of Gdańsk and finished General Surgery speciality training in Poland. He undertook a 2-year fellowship in Upper GI and complex abdominal wall surgery at the Royal Infirmary of Edinburgh, Scotland, as well as training in a number of world renowned centres of excellence including The Lichtenstein Amid Hernia Clinic at UCLA, Los Angeles, USA, The Department of Innovation and Minimally Invasive Surgery, Hospital Universitario Virgen del Rocío, Seville, Spain, and The Hanse Chirurgie Clinic in Hamburg, Germany.

He is a member of a number of National and International societies, including:
- Board member of the European Hernia Society
- Member of the HerniaSurge Group, a collaboration to develop and implement International Guidelines for Treatment of groin hernia in adult patients
- Joint co-ordinator of EHS Incisional Hernia Guidelines
- British Hernia Society (BHS) member
- European Association for Endoscopic Surgery and other interventional techniques (EAES) member

Maciej has published extensively in the topics of hernias, Abdominal Wall Reconstruction and Upper GI Surgery. He obtained his PhD in Medicine from Medical University in Gdańsk, Poland investigating the forces acting on implant anchored to the anterior abdominal wall, along with a randomised controlled trial: Comparison of two different concepts of mesh and fixation technique in laparoscopic ventral hernia repair. He has given numerous invited lectures both nationally and internationally. He has also volunteered with Operation Hernia and HerniaHelp, taking part in surgical charity missions in Ghana and Haiti.

YOHANN RENARD

Yohan is Professor of Anatomy and a hernia surgeon at Reims Hospital University, France. His teaching activities include surgical simulation and cadavers. He is a Board-member of the European Hernia Society and has recently became Treasurer in 2020.
WOLFGANG REINPOLD

Wolfgang Reinbold is Head and Senior Consultant at the Hernia Centre Hamburg-Wilhelmsburg at the Wilhelmsburg Hospital Groß-Sand.

DAVID SANDERS

David specialises in surgery of the gallbladder, anti reflux and hiatal surgery and hernia surgery at North Devon District Hospital. He is an internationally recognised expert in the field of abdominal wall reconstruction with over 50 publications in the field of hernia surgery and several book chapters and books. He has given numerous invited lectures on the topic both nationally and internationally. David is the Scientific Secretary of the British Hernia Society, Chaired the National Institute for Clinical Excellence approved commissioning guidance for groin hernia, was involved in developing the RightCare patient decision aid for inguinal hernias and is on the European working group that developed the Abdominal Wall Closure Guidelines and the International Hernia Guidelines. He acts as an advisor for NIHR and is the clinical lead for hernia coding for SNOMED International. David is the editor of the Bulletin of the Royal College of Surgeons of England.

AALI SHEEN

Professor Sheen was appointed Consultant Surgeon in 2005 at Manchester Royal Infirmary and specialises in both Hepatopancreatobiliary & hernia surgery.

He has an honorary personal chair with MMU awarded for his academic interests. He is well published in the field of Hernia surgery having engineered and published the world’s first sportsman’s hernia consensus statement which redefined the symptomatic groin in athletes as ‘inguinal disruption’.

Aali is on the board of the BHS and will become the next President in November 2020, he is looking forward to working with a great team over the next two years to continue on from the enormous progress made by the incumbent President Mr Liam Horgan. In his two years he hopes to see the British hernia registry take shape and also will be hosting the upcoming EHS annual conference to be held in Manchester in 2022.
DOMINIC SLADE

Mr Dominic Slade is a Consultant colorectal, abdominal wall and intestinal failure surgeon at Salford Royal NHS Foundation Trust, Salford, UK.

He was appointed to his consultant post in 2006, where he works as a general, colorectal and intestinal failure surgeon with interests in laparoscopy, inflammatory bowel disease, and complex abdominal wall reconstructive surgery. He is Chair of the Division of Surgery.

With his surgical colleagues he offers reconstructive surgery for intestinal failure resulting especially from surgical misadventure. Along the way he has developed a particular interest in the reconstruction of massive abdominal wall defects and complex incisional hernias resulting from the management of the open abdomen. This has led to a tertiary referral service, involved the appointment of a number of senior fellows in AWR for whom he is a trainer, and collaboration with a plastic surgery department in another hospital. He is part of the North West Abdominal Wall Reconstruction group, which aims to promote collaboration, education and research to improve the management of these patients across the North West of England.

He has published on the management of enterocutaneous fistulas and AWR, the use of tensor fascia lata (TFL) thigh flaps for massive abdominal wall defects, and presented nationally on patient selection, preoperative work up, management of the open abdomen and anterior and posterior component separation. He is co-editor of the “Manual of Complex Abdominal Wall Reconstruction” along with his friend and colleague, Mr Jeff Garner.

He is an enthusiastic trainer and is involved in regular teaching of complex abdominal wall reconstruction and the management of the abdominal catastrophe both nationally and internationally.

NEIL SMART

Neil is Consultant Colorectal Surgeon & Honorary Senior Lecturer, Exeter and Associate Editor, Colorectal Disease.
Brian Stephenson has a wide experience in all aspects of elective and emergency surgery having trained in London, Leeds and South Wales after spending sometime as a mission surgeon in South Africa. He still works with the charity ‘Hernia International’.

He was appointed Consultant General and Colorectal Surgeon to the Royal Gwent Hospital in Wales over twenty years ago and is Honorary Clinical Teacher in Surgery, University of Wales College of Medicine, Cardiff. He is a past Examiner in Surgery and Clinical Anatomy, Royal College of Surgeons of England and now sits on the Intercollegiate Specialist Board as examiner in General & Colorectal Surgery. He is on the disciplinary Panel of the Association of Coloproctology of Great Britain & Ireland.

He enjoys clinical research and spares no effort in helping his junior staff to audit and publish.

Stella Smith is a Consultant Emergency and General Surgeon in Manchester with a colorectal background. She has a dedicated interest in abdominal wall reconstruction (AWR). During her post- CCT fellowship in Trauma in Nottingham, she developed decision-making and technical skills in AWR. Whilst undertaking a Trauma Fellowship in Groote Schuur Hospital, Cape Town, she gained a wealth of experience managing patients with penetrating abdominal trauma who had damage control surgery resulting in an open abdomen.

In August 2018, Stella founded the Greater Manchester Abdominal Wall Reconstruction Forum; a multidisciplinary group, including general and plastic surgeons, that discusses complex and interesting cases as well as to share tips and tricks, promote research and undertake audits. There is an open-door policy for anyone wanting to attend.

Stella has a humanitarian interest and, in 2019, has been on call for the UK Emergency Medical Team to deploy to areas of natural disaster on behalf of the Department for International Development (DfID). She also has an active interest in major trauma and education. She has developed and convened bespoke trauma courses in Manchester for multi professionals. She is an Academic Advisor for the University of Manchester Medical School.
AL WINDSOR

Alastair Windsor trained at St Mary’s Hospital in London. Having spent three years working in sepsis and organ failure research at the Medical College of Virginia, USA, he returned as Lecturer and then Senior Lecturer and Honorary Consultant Surgeon to the Academic Surgical Unit at St James’ University Hospital, Leeds. A continued research and clinical interest in sepsis and nutrition provided an opportunity to join the staff at St Mark’s Hospital in London as colorectal surgeon and surgeon to the intestinal failure unit. He has now moved to join the staff as Consultant Surgeon to University College Hospital London, and Honorary Senior Lecturer at the University College London. Since moving from St Mark’s he has retained an expertise and busy tertiary referral practice focused on the management of the surgical abdominal catastrophe, which includes to a large extent the management of enterocutaneous fistulae, open abdomens and complex inflammatory bowel disease. With the emerging subspecialty of Abdominal Wall Reconstruction he has also developed a national referral practice for the management of complex abdominal wall hernias. In addition, in 2016 he organised the first international abdominal wall conference, in Europe ‘AWR Europe,’ a successful three day meeting dedicated to the global management of abdominal wall defects. As an active member of the BSG, ECCO, a founder member of Surgical ECCO he has been involved in development of both UK and European guidelines on the management of IBD. He has over one hundred and twenty publications and book chapters and remains a committed surgical trainer. His research now focuses on improved abdominal wall reconstruction techniques, surgical outcomes and enhanced surgical recovery.

MICHAEL WILSON

Consultant General & Benign Upper GI surgeon in Forth Valley, Scotland with a subspecialty interest in major trauma, hernia and emergency general surgery. Michael pursues his interest in the care of major trauma patients at St Mary’s MTC, London. Over the last few years he has led a number of Delphi research prioritisation exercises for various organisations, the most recent of which is for BHS. In his free time he is also the only general surgeon in the Royal Navy Reserves medical branch and act as Executive Officer for HMS Scotia, the navy reserve unit in the East of Scotland.
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1. Mesh Overlap Claims Testing Report R0041440 P-value = 0.007 (March 2014).
2. ReliaTack™ Perpendicular Tack Deployment and Shear Pull Test Report R0048915 P-value = 0.00 (March 2014).
**PRIZE ABSTRACTS**

**PP1** Should surgeons repair symptomatic, clinically occult, radiologically evident (SCORE) inguinal hernias? A case-control study of patient-reported outcomes

B. Farquharson, M. Aly, O. Clarke, G. Atkin
Lister Hospital, Stevenage, East and North Herts NHS Trust

**Introduction**
Patients who present with symptomatic, clinically occult, radiologically evident (SCORE) inguinal hernias represent diagnostic and therapeutic challenge with a wide differential diagnosis of groin pain. Often diagnosis leads to surgical intervention despite the lack of evidence supporting this practice. This study evaluates patient reported outcomes following surgical or conservative management of SCORE inguinal hernias.

**Methods**
Single centre retrospective review of radiology database and general surgery outpatient booking system between 2017-2018 to identify SCORE hernia patients. Notes review to identify surgical and conservative management groups. Patient reported outcomes determined using the validated EuraHS-QOL tool. Surveys sent to patients via post with follow up telephone conversations between October 2019- June 2020.

**Results**
Total of 76 patients identified. 63 (83%) replies received and analysed (10 did not answer, 2 declined, 1 deceased). 32 in the surgical cohort and 31 in conservative management cohort. No statistically significant difference between cohorts in age, BMI, ASA, Charlson Comorbidity Index. No statistically significant difference at the pain at the site of hernia (p = 0.203); restrictions of activities (p = 0.278); cosmetic discomfort (p=0.235) in patient reported outcomes between surgical and conservative cohorts.

**Conclusion**
No clear benefit was elicited from surgical intervention in this study in comparison to conservative approach. Surgery may not be the most appropriate intervention in this group of patients. Further prospective study is required to evaluate this clinical dilemma.

**PP2** The development and validation of risk stratification models for short-term outcomes following contaminated complex abdominal wall reconstruction

J.D. Hodgkinson, F.E.E. de Vries, J.J.M Claessen, C. A. Leo, Y. Maeda, O. van Ruler, O. Lapid, M.C. Obdeijn, P.J. Tanis, W.A. Bemelman, J. Constanti

**Background**
Short-term outcomes for patients undergoing contaminated complex abdominal wall reconstruction (CCAWR), including risk stratification, have not been studied in sufficiently high numbers. This study aims to develop and validate risk stratification models for Clavien-Dindo (CD) grade ≥3 complications in patients undergoing CCAWR.

**Methods**
A consecutive cohort of patients who underwent CCAWR in two European national intestinal failure centres, from January 2004 to December 2015, was identified. Data were collected retrospectively for short-term outcomes and used to develop risk models using logistic regression. A further cohort, from January 2016 to December 2017, was used to validate the models.

**Results**
The development cohort consisted of 272 procedures performed in 254 patients. The validation cohort consisted of 114 patients. The cohorts were comparable in baseline demographics (mean age 58.0 vs 58.1; sex 58.8% male vs 54.4%, respectively). A multi-variate model including the presence of intestinal failure (p<0.01) and operative time (p<0.01) demonstrated good discrimination and calibration on validation. Models for wound and intra-abdominal complications were also developed, including pre-operative immunosuppression (p=0.05), intestinal failure (p=0.02), increasing operative time (p=0.04), increasing number of anastomoses (p=0.01) and the number of previous abdominal operations (p=0.02). While these models showed reasonable ability to discriminate patients on internal assessment, they were not found to be accurate on external validation.

**Conclusion**
Acceptable short-term outcomes after CCAWR are demonstrated. A robust model for the prediction of CD ≥ grade 3 complications has been developed and validated. This model is available online at smbari.co.uk/smjconv2.

**PP3** A Qualitative Investigation of the Quality of Life (QoL) domains important to Patients with Complex Abdominal Wall Hernia (CAWH) – the initial analysis.

O. Smith, S. Chintapatla, P. Chitsabesan
1 York Abdominal Wall Unit, Dept of General Surgery, York Teaching Hospital

**Aim**
To identify the core domains of Quality of Life (QoL) important to Complex Abdominal Wall Hernia (CAWH) patients. QoL domains that are context specific to CAWH patients are currently unknown.

**Method**
The study employed phenomenology to gather profound, meaningful information of the lived hernia experience. Qualitative data were collected via semi-structured interviews using open-ended questions from 15 purposively sampled CAWH patients. Interviews were transcribed verbatim. Interpretative Phenomenological Analysis (IPA) was performed using NVivo software. Similar codes were grouped into categories and broader themes were developed from these via concept maps and IPA frameworks.

**Results**
6 domains and more numerous subordinate themes of interest were identified. Of importance were: pain; body image; mental health; impact upon interpersonal relationships; life adaptations; employment/financial issues.

**Conclusions**
Identifying what affects CAWH patient QoL and, having a deep understanding of their lived hernia experience, means that surgeons may select an appropriate choice of QoL instrument. Importantly, these preliminary results suggest that the domains important to CAWH patients are not fully explored by existing CAWH QoL tools. Further analyses will be performed ensuring saturation of themes, validity and trustworthiness. This study supports the development of a CAWH specific QoL tool based on factors that are important to the patients themselves and, based on these initial findings, current
tools have not yet considered this. A tool that is patient centred and built from the ground up, providing patients a voice, likely will be more useful in measuring useful patient outcomes that are important to both patient and surgeon.

**PP4  Exploration of variation in Management of Acutely Symptomatic Hernia – results from the MASH practice survey.**

O. Spence, V. Proctor, A. Sayers, S. Green, F. Burns, N. Smart, M. Lee
Sheffield Teaching Hospitals

**Introduction**

There is minimal evidence to guide the emergency management of groin and abdominal wall hernia. The aim of this project is to understand current variations in clinical practice across the UK when managing common types of acutely symptomatic hernia.

**Methods**

A survey of clinical practice was developed to explore the management of acutely symptomatic abdominal wall hernia (ASH) including groin (GH), umbilical (UH), and incisional hernia (IH). The survey captured respondent characteristics. It explored preferences in the management of each type of ASH, including factors related to treatment and repair strategy. Surgeons at ST3+ level with a UK practice were invited to participate through Twitter and collaborative networks.

**Results**

In total, 144 responses were received (response rate 26%). Of these, 62 (43.1%) were Consultant Surgeons, 105 (72.9%) did not have a specialist hernia practice, and 95 (66%) did not follow specific guidelines for emergency hernia repair. There was variation in investigations used e.g. CT required for IH (91%) but less for GH (34.7%) and UH (47.2%). Open repair was preferred in all settings. For GH with ischaemic bowel 76 (52.8%) would suture repair vs. 67 (46.5%) who would use a mesh (64.2% permanent synthetic) this is similar for IH, where 59 (41%) chose suture vs. 71 (49.3%) mesh, although 61.9% favoured biologic mesh for IH. Suture repair was preferred for UH with ischaemic bowel (69.4%).

**Conclusion**

The survey demonstrates variation in treatment of ASH. Areas which require further exploration include use of mesh and laparoscopy in the emergency setting.

**PP5  The experimental methodology and comparators used for in vivo hernia mesh testing; a ten year scoping review**

T. Whitehead-Clarke1,2, R. Karanjia3, J. Banks3, V. Beynon2, S. Parker1, D. Sanders4, V. Mudera4, A. Windsor5, A. Kureshi1
1 Division of Surgery and Interventional science, University College London 2 Department of General Surgery, St Georges Hospital 3 Department of General Surgery, University College London Hospital 4 Department of General Surgery, North Devon NHS Healthcare Trust 5 Princess Grace Hospital, HCA Healthcare, London

**Purpose**

Before being marketed, hernia mesh must undergo in vivo testing, which often includes biomechanical and histological assessment. Currently there are no universal standards for this testing and methods vary greatly within the literature. A scoping review of relevant studies was undertaken to analyse the methodologies used for in vivo mesh testing.

**Methods**

Medline and Embase databases were searched for relevant studies. 513 articles were identified and 231 duplicates excluded. 126 papers were included after abstract and full text review. Data extraction was undertaken using standardized forms.

**Results**

Mesh is most commonly tested in rats (53%). 78% of studies involve the formation of a defect; in 52% of which the fascia is not opposed. The most common hernia models use mesh to bridge an acute defect (50%). Tensile strength testing is the commonest form of mechanical testing (63%). Testing strip widths and test speeds vary greatly (4-30mm and 1.625-240mm/minute respectively). There is little consensus on which units to use for tensile strength testing. Collagen is assessed for its abundance (34 studies) more than its alignment (18 studies). Alignment is not measured quantitatively. At least 21 histological scoring systems are used for in vivo mesh testing.

**Conclusions**

The current practice of in vivo mesh testing lacks standardisation. There is significant inconsistency in every category of testing, both in methodology and comparators. We would call upon hernia organisations and materials testing institutions to discuss the need for a standardized approach to this field.

**FREE PAPERS**

**FP1  Quality of life following primary parastomal hernia repair: a pilot study**

K. Barrett, B. Azam, S. Arya, A. Bhargava
Department of Surgery, Digestive Diseases Centre, King George Hospital, Barking Havering and Redbridge University Hospitals NHS Trust (BHRUT)

**Background**

This pilot study aimed to evaluate quality of life following parastomal hernia repair by using the Carolinas comfort score (CCS); a questionnaire validated for inguinal hernia repair, with applicability in parastomal hernia patients (Heniford et al., 2008).

**Methods**

All adult patients admitted for elective parastomal hernia repair from September 2018 - September 2020 were identified using our hospital database. Patient age, sex, surgery type, complications and outcomes were collated. Patients then participated in a phone questionnaire using CCS to evaluate post-operative quality of life. Where a suture repair was performed, mesh-related questions in the CCS were omitted.

**Results**

Twelve patients (M:F = 5:7) were identified and contacted at a median interval of 392d (range 40-719d) following repair of hernia. Seven and five patients respectively underwent mesh and suture parastomal hernia repair. The mean CCS score was 13.4 (range 0-81). Maximum scores were 115 for mesh repairs and 75 for suture repairs with higher scores indicating more severe symptoms. Mean score for suture repairs was 9.8/75, mesh repairs 15.7/115.

Mesh sensation, pain and movement limitations were evaluated by activity on a scale of 0-5. Mean scores were 0.73/5 for mesh sensation, 0.5/5; 0.73/5 for pain and 0.74/5 for movement limitation. Furthermore three patients had recurrent hernia-requiring surgery and one patient experienced chronic post-operative pain.

**Discussion**

This pilot study showed an overall positive outcome for parastomal hernia repairs performed in our unit. The CCS largely demonstrates good quality of life post-operatively for parastomal hernia patients (Heniford et al., 2018).
Given the small sample size, a retrospective assessment of a larger cohort of patients across multiple hospitals is planned to provide a more accurate picture of patient outcomes in our region.

**FP2 Safety of using mesh in repair of strangulated groin hernia requiring bowel resection: a systematic review and meta-analysis**

**TANZEA GALA, MAHID MOHSIN, NOMAN SHAHZAD, RICHARD MORGAN**

**Background**

Approximately 10% of inguinal and 20 – 40% of femoral hernias present necessitating an emergency repair. There is paucity of literature specifically looking at safety of mesh in groin hernia repairs requiring bowel resection therefore, we decided to conduct a systematic review on the same. Our aim was to compare surgical site infection as well as recurrence between patients undergoing primary and mesh repair.

**Methods**

The protocol for systematic review was registered with PROSPERO. We searched PubMed, Embase and Cochrane Library and included studies reporting adult patients undergoing emergency groin hernia repair with bowel resection. Risk of bias of individual studies was assessed by two independent reviewers. Meta-analysis was done using RevMan5.

**Results**

Initial search strategy retrieved 295 studies of which 26 were included for systematic review based upon selection criteria.

Twenty-two studies concluded that using mesh in emergency groin hernia repair requiring bowel resection was safe including Duan SJ et al with sample size of 208 patients.

Four of twenty-six studies concluded that using mesh in emergency groin hernia repair with bowel resection was not safe.

Only 3 studies qualified for meta-analysis and the results showed risk of infection was significantly higher in those who underwent mesh repair.

**Conclusion**

Mesh seems to be safe for repair of emergency groin hernia with acceptable infection and recurrence rates. However, better quality studies are required to confirm our findings.

**FP3 A National Survey of Hernia Services and Surgeons: Review of Current Practices Within the UK in association with the British Hernia Society**

**T.N. Grove1,2, C. Kontovounios1,2, L. S Horgan4, A.C.J. Windsor5, O.J. Warren3**

1 Department of Surgery, Chelsea and Westminster Hospital, London, UK
2 Department of Surgery and Cancer, Imperial College London, London, UK
3 Department of General Surgery, Royal Marsden Hospital, London UK
4 Department of Surgery, Northumbria Healthcare NHS Foundation Trust, UK
5 HCA Healthcare, London, UK

**Introduction**

Hernia surgery is one of the most commonly performed operations in the UK with almost 100,000 annually1. In 2019 The European Hernia Society (EHS) appointed a working group from across Europe and published guidance for hernia centre and surgeon accreditation (ACCESS)2. The increasingly complex nature of hernia surgery due to new techniques and more difficult cases means there is a need for specialist hernia centres and surgeons. The British Hernia Society (BHS) is looking to establish how hernia surgery is being practiced in the UK.

**Method**

A multiple-choice survey designed on the ACCESS criteria was published and distributed using the online platform Typeform to all members of the BHS.

**Results**

183 completed surveys (see Fig.1). Including from 6 centers in Scotland, 3 in Wales, 5 in Ireland and 40 in England (see Fig.2). 97% of responders perform primary inguinal, primary ventral and incisional hernia. All responders have access to appropriate imaging and intensive care beds should they be needed. 53% of responders offer a specialized clinic service for hernia patients and only 34% have access to a multi-disciplinary team meeting for complex patients. 26% of responders contribute to a local register for hernia surgery.

**Conclusion**

Currently, according to the ACCESS group recommendations for an accredited hernia centre, only 5 centres surveyed would qualify. We have seen variance in practice, limited specialist services and limited infrastructure for complex decision making in hernia surgery with few centres contributing to local registries. A national accreditation system and a national register may increase reporting and accountability in hernia surgery resulting in improved care.

**References**


**FP4 A systematic review of outcome reporting in incisional hernia surgery**

**NoSTRA & HarMoNY (Northern Surgical Trainees Research Association Hernia & Abdominal Reconstruction - Measuring Outcomes, Nociception & quality of life collaborative research group)**

**Background**

The incidence of incisional hernia (IH) is up to 20% following previous surgery. The management of patients with IH can be complex with an array of techniques and meshes available. Ensuring consistency in reporting outcomes across studies on IH is important and will enable appropriate interpretation, comparison, and data synthesis across a range of clinical and operative treatment strategies.

**Methods**

Literature searches were performed in MEDLINE (01/01/2010 and 31/12/2019), EMBASE (01/01/2010 and 31/12/2019) and the Cochrane Central Register of Controlled Trials. All studies documenting clinical and patient-reported outcomes for IH were included.

**Results**

1340 studies were screened, of which 92 were included, reporting outcomes on 12,292 patients undergoing incisional hernia repair. Eight broad-based outcome domains were identified; including patient and clinical demographics, hernia-related symptoms, hernia morphology, recurrent incisional hernia, operative variables, post-operative variables, follow up and patient reported outcomes. Clinical outcomes such as hernia recurrence rates were reported in 80 (86.9%) studies. A total of nine different definitions for detecting hernia
recurrence were identified. Patient-reported outcomes were reported in 31 (33.6%) studies, with 18 different assessment measures used.

**Conclusions**
This review demonstrates the significant heterogeneity in outcome reporting in IH studies, with significant variation in outcome assessment and definitions such as hernia recurrence, wound infection and seroma formation. This is coupled with significant under-reporting of patient-reported outcomes. These inconsistencies in outcome reporting limit the interpretation and application of the current evidence base to clinical practice within a complex and diverse surgical arena.

**FP5** Small Bites Technique for Closure of Emergency Laparotomy

J. Hornsby, J. Royle
Sunderland Royal Hospital

**Aim**
Small bites technique for closure of laparotomy wounds has been extensively described. However, there is no primary evidence for the use of small bites technique for closure of emergency laparotomies.

**Methods**
All patients had their operations at Sunderland Royal Hospital. Patients were collected from the National Emergency Laparotomy Audit database and data was collected retrospectively from the electronic record.

The primary outcome measure was clinical and radiological evidence of midline incisional hernia. Secondary outcomes were wound infection and wound dehiscence.

**Results**
Sixty seven patients had emergency laparotomies using small bites technique, and 68 patients had standard closure technique.

In the small bites cohort no patients had wound infection or dehiscence. 3.2 per cent of patient had clinical evidence of midline incisional at follow up. Forty patients had a postoperative abdominal CT scan, of which one demonstrated an incisional hernia.

In the standard practice cohort, Five patients (7.3 per cent) were treated for wound infections, one of which had superficial dehiscence. 8.8 per cent of patients had clinical evidence of midline incisional hernia at follow up. Thirty four patients had a postoperative CT scan of which 5 demonstrated an incisional hernia.

**Conclusion**
We have demonstrated that small bites technique can be used for the closure of emergency midline laparotomy wounds, and is associated with lower rates of wound infection and incisional hernia.

**FP6** Comparison Of Inguinodynia in patients undergoing prophylactic ilioinguinal neurectomy vs no neurectomy in Lichtenstein mesh hernioplasty.

Z. Zafar Hashmi1, R. Ahmed2, T. Zafar3, N. Yousaf4, M. Ahmad4, M. Ahmed4, H. Anwar5, Q. Qavi6, M. Madanur1
1Queen Elizabeth Hospital Woolwich
2Princess Royal University Hospital
3SKHMC
4Jinnah Hospital Lahore
5Basildon Hospital

**Objective**
The objective of this study is to compare the frequency of inguinodynia in ilioinguinal neurectomy VS no neurectomy in patients undergoing Lichtenstein mesh hernioplasty.

**Method**
200 male patients with unilateral, primary, reducible inguinal hernia were randomly distributed in two groups by using lottery method to undergo Lichtenstein’s hernia repair i.e. with and without ilioinguinal neurectomy. All the operations were carried out under local anesthesia. Pain score was calculated using the VAS system at 3rd month and inguinodynia was labelled if it is more than 1 on VAS scale.

**Results**
200 male patients with mean age of 53.25 ± 6.768 were included. 42 (21%) had Inguinodynia after surgery. When we cross tabulated both groups with inguinodynia, results came up significant (p=0.001).

In neurectomy group 10 patients had inguinodynia while in no neurectomy group, 32 patients were having Inguinodynia. There was no effect of malnutrition on outcome. Younger age group benefitted more from procedure.

**Conclusion**
It is concluded that there is difference in frequency of inguinodynia in ilioinguinal neurectomy versus no neurectomy in patients undergoing Lichtenstein hernia repair. Patients with ilioinguinal neurectomy had reduced incidence of inguinodynia.

**VIRTUAL POSTERS**

**VP1** Spinal Anaesthesia Versus General Anaesthesia During Laparoscopic Total Extraperitoneal Repair Of Inguinal Hernia: A systematic review and meta-analysis

P. Bhattacharya1, S. Hajibandeh2, S. Hajibandeh1
1Department of General Surgery, Sandwell and West Birmingham Hospitals NHS Trust
2Department of General Surgery, Glan Clwyd Hospital

**Objectives**
To evaluate comparative outcomes of spinal anaesthesia (SA) and general anaesthesia (GA) during laparoscopic total extraperitoneal (TEP) repair of inguinal hernia.

**Methods**
We conducted a systematic search of electronic information sources, and bibliographic reference lists Postoperative pain assessed by visual analogue scale (VAS), individual and overall perioperative morbidity, procedure time and time taken to normal activities, were the outcome parameters. Combined overall effect sizes were calculated using fixed-effect or random-effects models.

**Results**
We identified 5 comparative studies reporting a total of 1518 patients (2134 hernia) evaluating outcomes of laparoscopic TEP inguinal hernia repair under SA (n=1277 patients, 1877 hernia) or GA (n=241 patients, 257 hernia). SA was associated with significantly lower post-operative pain assessed by VAS at 12 hours (MD:−0.32, P=0.0001) and shorter time to normal activities (MD:−0.30, P=0.002) compared with GA. However, it significantly increased risk of urinary retention (OR:4.02, P=0.01), hypotension (OR:3.97, P=0.004), headache (OR:7.65, P=0.003), and procedure time (MD:3.82, P=0.004).

There was no significant difference in VAS at 24 hours, seroma, wound infection, and vomiting between the 2 groups. There was a nonsignificant decrease in overall morbidity in favour of GA (OR:1.84, P=0.17) which became significant following sensitivity analysis (OR:2.59, P=0.01).
Conclusions
Although TEP inguinal hernia repair under SA may reduce pain in early postoperative period, it seems to be associated with increased postoperative morbidity and longer procedure time. It may be an appropriate anaesthetic modality in selected patients who are considered high risk for GA.

**Methods**
Data were collected for patients admitted acutely with a femoral hernia to all NHS trusts in the North of England between 2002-2016. This included baseline demographics, investigations and operative interventions. Outcomes of interest were 30-day inpatient mortality and length of hospital stay (LOS).

**Results**
A total of 1475 patients presented over the 15-year study period. The cohort were predominantly female (n=1137, 77.1%) with median age of 76 years (IQR: 65 to 84). No significant changes in distribution of gender or age were noted over the study period. The burden of comorbidity, measured by Charlson score, increased with time (p<0.001). Mean length of stay was 8.61 days (95% CI: 7.92, 9.29) increasing with age (p<0.001) and number of comorbidities (p<0.001). The overall 30-day inpatient mortality rate was 6.24%. Amongst more comorbid patients this was significantly amongst higher (Charlson 1-4; 15.7%, Charlson ≥5; 18.2%, p<0.001).

**Conclusion**
This study highlights changing patient demographics that may necessitate alterations to modern day clinical practice. Recognition of these higher-risk patient groups is important for both optimisation of perioperative care and ensuring informed consent as part of shared decision-making process.

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**VP2** Emergency repair of femoral hernia in the North of England; a 15-year retrospective cohort study.

**D Clyde**, **LQ Li**, **RC McLean**, **LR Brown**

1 NHS Fife, Kirkcaldy, Scotland.
2 NHS Lothian, Edinburgh, Scotland.
3 The Newcastle Upon Tyne NHS Hospitals Foundation Trust, Newcastle Upon Tyne, England.

**Background**
Emergency operative intervention is required for over 60% of femoral hernias. This study aimed to review current practice regarding investigation and operative management of patients admitted with a femoral hernia in the North of England.

**Methods**
Patients ≥18 years admitted acutely with a femoral hernia between 2002-2016 to NHS trusts in the North of England were identified. Data on demographics, investigations and operative interventions was collected. Outcomes including rate of bowel resection, length of stay (LOS) and 30-day postoperative mortality were analysed.

**Results**
1475 patients presented acutely with a femoral hernia were identified. While an increase in conservative management was noted over time (p=0.013), 1329 patients (90.1%) underwent emergency surgery. The use of pre-operative CT scanning also increased significantly from 1.3% (2002-2006) to 14.0% (2012-2016). No significant difference in operative rates or time to operation was observed amongst patients who did undergo a CT scan. Of those who presented with obstructive symptoms, only 18.8% required a bowel resection, 94.4% of these being small bowel. Bowel resection was associated with significantly increased 30-day postoperative mortality (18.3% vs. 4.4%, p<0.001) and LOS (p<0.001). Rates of laparoscopic repair increased over time from 1.1% (2002-2006) to 8.8% (2012-2016). Comparison between open and laparoscopic showed no significant difference in LOS or 30-day postoperative mortality.

**Conclusion**
The increase in pre-operative CT scanning and utilisation of laparoscopic techniques likely reflects changes in wider general surgical practice. Further research is required to study the impact that these developments have on surgical outcomes.

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**VP3** Patient demographics and outcomes following acute presentation with femoral hernia; a 15-year retrospective cohort study from the North of England.

**D Clyde**, **LQ Li**, **RC McLean**, **LR Brown**

1 NHS Fife, Kirkcaldy
2 NHS Lothian, Edinburgh
3 The Newcastle Upon Tyne NHS Hospitals Foundation Trust, Newcastle Upon Tyne

**Background**
Femoral hernias account for around 4% of all groin hernias. Although rare, they pose a considerable risk of harm to patients, owing to their tendency to present acutely with intestinal obstruction. The study aimed to report on patient demographics and outcomes following emergency presentation with a femoral hernia.

**Methods**
A total of 1475 patients presented over the 15-year study period. The cohort were predominantly female (n=1137, 77.1%) with median age of 76 years (IQR: 65 to 84). No significant changes in distribution of gender or age were noted over the study period. The burden of comorbidity, measured by Charlson score, increased with time (p<0.001). Mean length of stay was 8.61 days (95% CI: 7.92, 9.29) increasing with age (p<0.001) and number of comorbidities (p<0.001). The overall 30-day inpatient mortality rate was 6.24%. Amongst more comorbid patients this was significantly amongst higher (Charlson 1-4; 15.7%, Charlson ≥5; 18.2%, p<0.001).

**Conclusion**
This study highlights changing patient demographics that may necessitate alterations to modern day clinical practice. Recognition of these higher-risk patient groups is important for both optimisation of perioperative care and ensuring informed consent as part of shared decision-making process.

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**VP4** Driving forward the improvement of the provision and documentation of driving advice on discharge following elective day case inguinal hernia repair surgery

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Worcestershire Acute Royal Hospitals, Worcester

**Introduction**
Previous driving advice following groin hernia repair was based on the concern that postoperative pain could prolong reaction times and increase the risk of early recurrence as a result of the inertial forces on impact/stopping. It is now accepted (RCSE Guidelines) that 1 week would suffice, if the patient is free from pain or the sedative effects of any medication. The GMC states: “Clinical Records should include information given to patient”. The aim of our audit is to find out if patients are receiving the correct information and if it is documented appropriately.

**Methods**
Retrospective study from 1st of August-October 31st 2019 and then again from the 1st-29th of February 2020 following intervention. Data collected included documentation of driving advice on discharge letters, operation note and discharge summary and questionnaire of surgical staff enquiring about knowledge of RCSE guidelines.

**Results**
Only 1 Consultant Surgeon was aware of formal driving guidance and gave written advice. 94% of surgical members of the team gave verbal advice in keeping with RCSE but were unaware that published guidelines existed.

During phase I, (n=147) documentation in the clinical letter, operation note and discharge summary was 10%, 8% and 4% respectively. Following intervention n=29, this increased to 21%, 45% and 41%. Intervention included: departmental education and a patient leaflet was created and added to the consent and discharge bundle.

**Conclusion**
Intervention with patient centred leaflets and education of staff with guidelines is essential to provide patients with consistent evidence based information, verbal AND printed, on driving following inguinal surgery.
VP5  Outcome of large incisional hernia repair in dialysis and Renal Transplant patients

Sam Dutta
Nottingham City Hospital

Aims
The outcome of large incisional hernia repair in renal patients by a single surgeon using prosthetic mesh was investigated.

Methods
Surgery performed on patients on dialysis, transplant, and those with simultaneous kidney-pancreas (SPK) transplants. Age range was from 30-79 (median age 62). All patients had multiple comorbidities and most were ASA 3. Twelve patients had hernia from the transplant scar in iliac fossa extending to subcostal area (L1, L2, and L3 areas). Defects ranged from 4-7 cm wide and 6-13 cm long. All mesh was placed in preperitoneal plane. The two SPK patients had multiple midline herniae. Four Laparoscopic repairs were performed using Symbotex™ Composite mesh. 14 open repairs were performed using 30x30 cm Parietene macroporous prolene mesh. All patients made uneventful recovery with no change in renal function. There was one seroma (not needing intervention), one ureteric injury managed with immediate recovery with no change in renal function. There was one recurrence in midline open repair and one subcutaneous wound infection requiring VAC dressing.

Conclusion
Major incisional hernia repair in renal failure and transplant patients can be done safely in expert hands.

VP6  Long term results of Progrip mesh for retro-muscular repair of ventral hernia

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Northumbria Healthcare NHS Foundation Trust

Background
An issue that has become apparent in using Progrip in ventral hernias is the restriction in the available sizes. The area of dissection for mesh placement can be variable. This report is based on a subgroup analysis of the cases in which a combination of Progrip meshes was used.

Methods
Retrospective review of our prospective database. Cases were identified of Progrip mesh used in ventral hernia repair from 2016 to 2020. Subgroup analysis was performed of cases which Progrip meshes were combined. Telephone follow-up was done in September 2020.

Results
68 cases. Mean age of patients was 63.13 (26-87). 33 were females. Mean ASA grade was 2 (range 1-4). Procedure time 164.35 minutes (45-490). Mean defect size was 7.23 (2 to 25cm). Mean mesh size was a 20x15cm mesh. Follow up was achieved in 63/68 cases. Follow up ranged from 1-4 years. Recurrence was found in 4 (6%). 9 had ongoing abdominal pain. 59 (93.65%) returned to normal activity. 3 returned to theatre for wound dehiscence and seromas. 12 cases required 2 meshes to be combined. All cases involved mesh size of 30x30cm. Mean age was 64 (44 to 78 years). 6 males. Mean defect size was 9 cm. Operative time was 235 minutes (120 to 320). Mean post-operative stay was 5 days (4 to 60). 3 cases required component separation (2 anterior component separation and 1 posterior component separation). No recurrences or further surgery. 1 had ongoing pain. 9 cases had full return to activity.

Conclusion
Combining Progrip meshes in ventral hernia is an acceptable practice. Mesh may be sutured together or overlapped with equivalent results. Extending the product range to a 30x30cm mesh would obviate the need for mesh overlap in our practice.


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Introduction
A 2-year single centre evaluation of a novel mesh hernia fixation device in inguinal hernia repair. A retrospective review of 110 patients underwent 120 laparoscopic transabdominal preperitoneal groin hernia repairs (TAPP). The mesh fixation was performed using Liquiband ™ Fix: However, peritoneal closure was achieved using V-Loc™ suture.

Patients and methods
A retrospective review for 120 inguinal hernia repair for 110 patients who were treated electively using TAPP repair over two years from July 2018 up to July 2020. There were 105 males and 5 females, median age 63 years (range from 25-75 years).

Mesh fixation was successful in 115 repairs. Liquiband® Fix™ application was failed in five. TAPP repairs out of 120 surgery. Equipment failure was noticed in two out of 160 times.

Follow-up
Patients were followed up with an out-patient visit at 8-12 weeks post-operatively. Generic and Hernia-specific PROMs questionnaire was used to assess the patients 6 months postoperatively through a virtual clinic.

Results
The instrument failure rate was 3.7%. Mesh was fixed successfully in 95.80% of the surgeries. Device clogging incidence was recorded in 60 procedures which were about 105 clogs in total. Inguinal hernia-repair specific complications were acceptable; postoperative pain score was 4 out of 10, seroma/hematoma was only 1.

Long term complications; one patient had significant pain for 6 months, general and specific PROM questionnaire were satisfactory. No patient has a recurrence.

Conclusion
This retrospective study confirms the feasibility and efficacy of using the Liquiband Fix™ as a mesh fixation method in inguinal hernia TAPP repair. It also confirms the safety of the device and the low failure rate.


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Background
The Ventral Hernia Working Group (VHWG) classification of ventral/incisional hernia (IH) was developed by expert consensus in 2010. Subsequently, Kanters et al have demonstrated the validity of a modified version of the system for predicting short-term outcomes. This study aims to evaluate the modified system for predicting hernia recurrence.

Methods
Patients undergoing IH surgery (defined by OPCS codes) in the England Hospital Episode Statistics (HES) database, from 1997-2012, were identified. Baseline demographics at index hernia operation and episodes of further hernia surgery (FHS) were recorded. Risk factors for FHS were identified using cox regression and evaluated against the modified-VHWG grade using receiver-operating characteristics (ROC).

Results
The final analysis included 214,082 index IH operations. Of these, 52.6% were female and mean age was 56.59 (SD 15.9). An admission for FHS was found in 8.3% cases (17,714 patients).

Multi-variate cox regression revealed contaminated hernia (p=0.0001), pre-existing IBD (p=0.0001) and hernia comorbidity (p=0.05) to be significantly related to long-term FHS. Classifying patients using these factors, according to the modified-VHWG classification, revealed that compared to Grade 1, the hazard ratio (HR) of FHS increased in Grade 2 (HR1.19; p=<0.0001) and further increased in Grade 3 (HR1.79; p=<0.0001). ROC analysis revealed the area under the curve to be 0.73 (95%CI 0.73-0.74).

Conclusion
This analysis demonstrates the broad validity of the modified-VHWG classification in discriminating risk for FHS. Inclusion of pre-existing IBD as a factor defining Grade 2 patients would be recommended. This analysis is limited by the absence of certain factors within the HES database, such as BMI.

Method
It was a retrospective collection of data of patients admitted to Queen Elizabeth Hospital, Woolwich for open inguinal hernia repair in December 2019. Data was collected from medical records and patient files.

Exclusions
2 files were excluded from study as details of consent weren’t available in patient files.

Results
Total number of patient was 14. Exclusion of patient number was 2. 7 out of 12 consents were taken by Consultants and 5 out of 12 were taken by registrars. ‘Infection’ as complication was mentioned in 100% of consent forms. In 9 out of 12 consent forms, pain was mentioned. 8 out of 12 consent forms had ‘bleeding’ recorded. 6 out of 12 mentioned ‘Ischaemic orchitis and testis atrophy’. 9 out of 12 written ‘Vas injury’ in the consent forms. ‘Nerve injury’ was there in 5 out of 12 forms. 9 out of 12 had ‘persistent postop pain’ documented. 1 out of 12 mentioned ‘Femoral vessel injury’ and ‘Mesh infection’. 8 out of 12 was showing ‘VTE/PE’ as documented. Only 3 out of 12 consent form had ‘Atelectasis’ mentioned as a complication. 8 out of 12 had ‘recurrence’ documented as complication.

Unfortunately, none of the consent forms showed ‘Hydrocele’, ‘Genital oedema’ and ‘Urinary retention’ as documented complications.

Discussion/Conclusion
Other complications have not been mentioned or could be verbally mentioned to the patient but not recorded in the consent form properly. Other possible complications were not seen in the consents in varied rate and by both Consultants and Registrars.

Recommendations
It’s been recommended to print out the information sheet to the patient along with obtaining consent and give patient adequate time to read and understand the information sheet. This sheet can contain simple illustration with all needed information about possible complications after inguinal hernia repair. In this way, we can assure that anyone who takes consent can deliver all possible information about potential risks of the procedure and so that it helps to avoid litigation and future medico legal complications for the trust and the surgeons.

This will be re audited in 3-6 months to check if recommendations are being followed.

A diaphragmatic hernia is the protrusion of an abdominal organ through a defect in the diaphragm into the thoracic cavity. This can be divided into congenital or acquired. This injury is infrequent, occurring in approx. 5% of thoraco-abdominal blunt traumas, with the source of this in 90% being road traffic collisions. We herein describe a case of a 61 year old male who presented as an emergency admission with generalised abdominal pain. He had been the sole survivor of a 5 person road traffic accident 30 years ago. Cross sectional imaging showed a likely missed traumatic diaphragmatic hernia (TDH) requiring operative intervention. Operative access was gained via a Kocher’s incision, and the hernia reduced. Loops of jejunum were found incarcerated between segment IVa of the liver which had grown into the hernial defect. This is one of few case reports describing liver involvement, and to this degree of hypertrophy, in a TDH.

Aberdeen Royal Infirmary

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VP11 Elective laparoscopic inguinal hernia repair - an audit of departmental practice
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Introduction
NICE guidance (2004) recommends that laparoscopic surgery may be offered as an alternative to open surgery to all patients undergoing inguinal hernia repair provided surgical expertise is available. Laparoscopic repair is the preferred technique for recurrent and bi-lateral repairs. More recent guidance published by the HerniaSurge group (2015) supports these recommendations. The aim of this audit was to determine how many patients locally are undergoing elective laparoscopic inguinal hernia repair and to determine if departmental practice is in line with the aforementioned guidance.

Methods
All inguinal hernias operated on over a two-year period from January 2017 until December 2018 were analysed retrospectively.

Result
391 inguinal hernias were undertaken over the two-year audit period of which 19% (n= 74) were laparoscopic. Laparoscopic repair was undertaken for 15% (n=54) of unilateral primary hernias, 78% (n=18) of bi-lateral hernia and 13% (n=2) of recurrent hernias.

Conclusion
The majority of patients with bi-lateral inguinal hernia underwent laparoscopic repair however only a minority of recurrent cases were performed laparoscopically. Despite this it is unclear if increasing the rates of laparoscopic surgery would improve overall outcomes for patients. Guidelines do not suggest minimum numbers of laparoscopic cases and factors such as the availability of surgical expertise and patient factors need to be considered when deciding on approach. More evidence is needed to determine if there is any significant difference in desirable outcomes including reducing complications, symptom relief and patient satisfaction.

VP13 Hernioscopy: a valid technique to explore the abdominal cavity in incarcerated hernias that spontaneously retract over the general Anaesthesia induction
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Objective
The bowel and omentum exploration is of paramount importance over the strangulated and incarcerated inguinal hernia to rule out possible ischemic damage of the bowel and omental fat. In approximately 1% of cases of incarcerated hernias, a strangulated viscus will reduce spontaneously following administration of muscle relaxants during induction of anaesthesia, and the surgeon has to perform an exploratory laparotomy. Hernioscopy can allow direct inspection of the whole abdominal cavity and the performance of further surgical procedures such as small bowel, large bowel or omentum resection, without the need of a formal laparotomy.

Methods
Hernioscopy is performed following insertion of 10-12 mm port through the hernia sac after its complete mobilization. A 30° camera is then passed into the abdomen through the sac and a thorough examination of the abdominal cavity is performed.

Results
If necessary, further ports can be used both into the hernia sac and through the abdominal wall to perform additional procedures such as bowel resection. After the exploration and the possible resection, the operation is concluded with a tension-free mesh repair of the hernia.

Conclusions
Hernioscopy is an easy and reliable method to explore the abdominal cavity and make sure of the viability of the bowel in patients with strangulated inguinal hernia and to proceed to minimally invasive resection if needed.
Introduction
Open inguinal hernia repair is a common operation carried out in the NHS. Patients are often instructed to restrict physical activities after repair – the activities and time periods varying between surgeons. British Hernia Society guidelines (2013) recommend restricting heavy lifting for a maximum of 2-3 weeks and no driving for 7 days. We found in an initial audit that only 3% of patients were being given advice in keeping with British Hernia Society guidelines. We educated the department, aiming to reduce the restrictions given to these patients.

Methods
We analysed discharge summaries for patients undergoing day case open inguinal hernia repair in an NHS hospital, excluding laparoscopic and inpatient operations for sample homogeneity. Patient demographics, uni/bilaterality of repair and recommended restrictions were recorded. We compared this to our results prior to education.

Results
A number of discharge summaries had restrictions on heavy lifting, however most of these restrictions were in keeping with the recommended 2-3 weeks. A small number of discharge summaries had non-guideline specified restrictions, including avoiding exercise.

Conclusion
Many patients in an NHS hospital were inappropriately recommended to restrict certain activities and for time periods not in accordance with British Hernia Society guidelines. Surgeons performing open inguinal hernia repair have reduced the amount of restrictions being put on these patients, following education of the department.

Results
9 females and 6 males were included in this work 8 patients had incisional hernias post Pfannenstiel incision for previous gynaecological surgeries, and 7 patients post complicated appendicitis surgeries. Mean defect size 3.2Cm, mean operative time was 123 minutes, mean hospital stay was 1.5 days, no reported intra or immediate postoperative complications. On Post-operative follow up 4 (33.33%) patients developed post-operative seroma, 3 were self-limited and 1(6.6%) needed frequent aspiration. No reported recurrence or chronic post-operative pain.

Conclusion
Laparoscopic ventral hernia repair offers better options in terms of postoperative pain and recovery. In this work (TAPP) approach has shown a better option of defect coverage as well as mesh fixation and in turn reduced early recurred century rate.

Methods
1. We analysed discharge summaries for patients undergoing day case open inguinal hernia repair in an NHS hospital, excluding laparoscopic and inpatient operations for sample homogeneity. Patient demographics, uni/bilaterality of repair and recommended restrictions were recorded. We compared this to our results prior to education.

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Laparoscopic ventral hernia repair offers better options in terms of postoperative pain and recovery. In this work (TAPP) approach has shown a better option of defect coverage as well as mesh fixation and in turn reduced early recurred century rate.
Minimally Invasive surgery at midnight? A case of acute large bowel obstruction due to incarcerated recurrent inguinal hernia treated with TAPP technique.

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Background
73 years old frail male presented acutely unwell through A&E with abdominal distension and obstipation for several days. CT scan demonstrated closed loop LBO due to incarcerated sigmoid colon in recurrent left inguinal hernia (previous open repair 5 years ago in same hospital) and competent ICV. Patient deemed high risk for a laparotomy by the on-call anaesthetist. Therefore, after discussion with patient, MIS approach deployed successfully same day, performing TAPP mesh repair of hernial defect; no bowel resection required.

Methods
6-7 minutes video presentation with narration from the authors, including pre-op CT scan images and demonstrating the particularities of the technique deployed, in the case presented.

Results
Patient discharged day 2 post-op after transit restarted. Follow-up at 3 months is satisfactory.

Conclusion
Whilst incarcerated inguinal hernia with bowel obstruction is not an uncommon scenario in the emergency surgery unit, performing laparoscopic surgery in these cases is often neglected, due to limited resources/expertise, particularly out of hours. Nevertheless, this is of considerable benefit to the patient, with significantly reduced morbidity and LOS. In our Hospital majority of the surgeons are trained in MIS hernia repair techniques and there is growing tendency to deploy MIS techniques in emergency presentations, including complicated hernias.

Post-operative outcomes using ONSTEP inguinal hernia repair – The First UK Case Series

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Aim
The ONSTEP hernia repair is a new technique using an OnFlex mesh and no sutures for fixation. Only 19 papers relating to ONSTEP can be found in PubMed. This report aims to evaluate post-operative outcomes after ONSTEP repair.

Method
Adult patients who underwent elective, primary hernia repair using the ONSTEP technique between 2014-2019 under one surgeon at the Borders General Hospital, were identified retrospectively. The details of the study were posted to patients with the Carolinas Comfort Scale (CCS), and the patients were contacted by telephone and their responses recorded. The CCS asks patients to rate pain, sensation of the mesh and movement limitation during different activities, using a 6 point scale (0-5). The best possible score is 0 and the worst possible score is 115.

Results
Of the 83 cases identified, 56 (67%) returned answers. The mean CCS score was 4.7. 52 patients (92.9%) reported no, or mild symptoms. 4 patients (7.1%) reported moderate to disabling symptoms.

Conclusions
The results from this case series support the preliminary data from ONSTEP. The percentage of patients with postoperative discomfort was low and comparable to other methods of hernia repair. This study supports the continued use of ONSTEP in our centre.

The impact of body mass index on inguinal hernia repair under local anaesthesia

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Purpose
Open mesh repair of inguinal hernia is acceptable and can be performed under local anaesthesia (LA). Individuals with high BMI have often been excluded from LA repairs for varying reasons including safety concerns. Open repair of unilateral inguinal hernia (UHI) amongst individuals with different Body Mass Index (BMI*) groups was evaluated using LA volume and length of operation (LO) as safety endpoints, operative pain scores and patient satisfaction scores.

Methods
438 adult patients were included. Operative pain, patient satisfaction, LO and LA volume were prospectively recorded. 33 exclusions for underweight, additional intra-operative analgesia, multiple procedures, or incomplete data.

Results
92.2% males, aged 17-94 years, BMI above normal in 62.8% ranging 19-39 Kg/m². LO 13-100 minutes (average 37mins (SD=12)) utilizing an average LA volume of 45ml (SD 11) per patient. Across BMI groups, no significant difference in LO (P=0.168) or patient satisfaction (P=0.388). Mean LA volume was 43ml, 47ml and 47ml respectively among normal, overweight and obese individuals (P=0.011). VAS categories: no pain (15.5%), mild pain (77.2%), moderate pain (7.1%) and only 1 patient (0.2%) experienced severe pain. Average pain score was highest amongst overweight individuals who were also more likely to experience moderate pain (P=0.001), however, mean pain score in all groups remained within the mild pain category, with over 90% in each group experiencing mild or no pain. 89% rated their experience ≥ 90 out of 100.

Conclusion
LA volume differences do not appear clinically relevant as volume required per patient was low, dosage was safe, no systemic analgesic or GA was required. LA repair is safe and well tolerated irrespective of BMI. Raised BMI is not a viable reason for exclusion of obese/overweight individuals from LA repair.

Stomach in a parastomal hernia: a rare complication of stomas.

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Dartford and Graveshams NHS Trust

Parastomal hernia (PSH) is one of the most known complications to end-colostomies. However, PSH containing the stomach is rare: not many case reports were found in literature search. This case is a 92 years old woman who was brought in by ambulance to the accident & emergency department with complaints of vomiting, abdominal distension, and a palpable mass on the left flank of the abdomen and with reduced output from the stoma.

A CT scan of the abdomen was requested and showed a PSH containing a partially incarcerated gastric hernia. She was managed conservatively with an NG tube which was removed after a few days
following a copious drainage of stomach content and spontaneous reduction of the hernia. This was quite an interesting case given that conservative management only was used in the treatment of this case.

Although there are only few similar cases of para stomal hernias containing the stomach reported in the literature, an almost similar pattern in presentation of this unique case can be deduced following a thorough comparison of cases in the literature which can be quite helpful both academically and clinically; they are often advanced in age; and, are usually females with end-colostomies.

**VP21** Is the use of mesh in inguinal hernia repair redundant?

**Dr Ekowo; Mr Rakesh Bhardwaj**
Dartford and Gravesham NHS Trust

Nowadays, people are asking: are the symptoms experienced by patients with inguinal hernia mesh repair largely attributed to the mesh? Do the benefits of mesh outweigh any possible risks? In this essay, I will look at what patients themselves think about their mesh and what evidences are available.

Watching the Victoria Derbyshire programme on BBC 2, one is convinced that something needs to be done about patients who are suffering post-operative complications of hernia repair. According to the British Hernia Society, the use of mesh to repair most hernias has been the preferred method in the UK and worldwide for over 25 years. Respecting to the Victoria Derbyshire allegation, the Royal College of Surgeons of England has maintained that recent studies suggest that the risk of pain following an inguinal hernia repair is similar, regardless of whether the operation uses mesh or not. Having done a thorough literature review, no single study has solely attributed complications post hernia surgery to mesh. One study stands out: according to Lockhart K et al, Mesh and non-mesh repairs are effective surgical approaches in treating hernias, each demonstrating benefits in different areas. Compared to non-mesh repairs, mesh repairs probably reduce the rate of hernia recurrence.

The burden of post hernia repair on patients is debilitating, real and deserves the much-needed understanding and care. Surgeons must explain risks and benefits of mesh repair and non-mesh repair carefully to patients before treatment.

**VP22** Open versus Laparoscopic functional Chronic Groin Pain: Is there a difference?

**H.K. S. I. Singh1, L. H. Massey2, T. Arulampalam3, R.W Motson4, N.Pawa5**

Background

Inguinal hernia repair is one of the most commonly performed general surgical procedures. The introduction of laparoscopic repair has seen improvements in acute postoperative pain but conflicting results in relation to chronic groin pain (CGP). In its initial conception, CGP was defined as pain lasting greater than 3-6 months but has recently been recommended by the HerniaSurge Group to include moderate pain affecting daily activities. This has functional implications.

**Objectives**

Our aim is to determine if laparoscopic inguinal hernia repair is associated with less risk of CGP compared to open repair, in the context of this new definition.

**Methods**

A systematic literature review and meta-analysis was performed. Randomised controlled trials (RCTs) only comparing CGP rates in laparoscopic and open repair of primary unilateral or bilateral inguinal hernias with 80% follow up for at least one year were included.

**Results**

Seven RCTs which assessed CGP as moderate and/or affecting ADLs were identified. The trials included a total of 2,843 patients randomised to laparoscopic (n=1367) and open groups (n=1476). 98.9% were men. There was no difference in CGP between laparoscopic and open groups (p=0.08). The funnel plot did not suggest the presence of publication bias and there was no significant inter-study heterogeneity (I²=0%). Follow up varied from 12-52 months.

**Conclusions**

Our meta-analysis suggests that there is no functionally relevant difference in CGP between laparoscopic and open inguinal hernia repair.

**VP23** ADPKD: A significant risk factor for renal transplant-related incisional hernias

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**Introduction**

The incidence of post-transplant incisional hernia (IH) is sparsely reported and ranges from 1.1 to 7%. Renal transplant recipients have all the recognised incisional hernia risk factors with the additional burden of underlying uraemia and post-operative immunosuppression. This study aimed to investigate the incidence of, and potential contributory factors for IH formation following renal transplantation.

**Methods**

A retrospective analysis of a contemporaneously maintained renal transplant database at a single UK centre of adult patients receiving first and second transplants over 6 years (January 2011 to December 2016) was undertaken with 3 year follow up. Multivariate logistic regression analysis was used to determine risk factors for IH formation. Statistical analysis was performed using SPSS version 25.

**Results**

961 renal transplant recipients were included in the analysis. The overall incidence of post- transplant IH was 6.7% (64/961). Multivariate logistic regression analysis showed that patients with Autosomal Dominant Polycystic Kidney Disease (ADPKD) had a 2.48-fold risk of developing IH post-transplant. The incidence of IH in ADPKD patients was 10.1% (14/138), significantly higher than the overall risk (p<0.05). Recognised IH risk factors, including diabetes mellitus, smoking status and obesity were not statistically significant.

**Conclusion**

The overall incidence of renal transplant related IH is higher than recently reported, with ADPKD patients having the greatest risk. This may be contributed to by weakness of collagen and extracellular matrix. Further investigations are required to determine ways to mitigate IH risk and form the basis of ongoing studies.
**VP24** Outcomes of primary and recurrent inguinal hernia repair with prosthetic mesh in a single region over 15 years

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**Introduction**  
Sutured inguinal hernia repairs are now uncommon, with evidence suggesting that those augmented with mesh are associated with a lower recurrence rate. We aimed to explore the suggestion that the established use of mesh does indeed lower the rate of operation for recurrence in a single National Health Service region.

**Method**  
We collected retrospective OPCS coded data across one region of all primary and recurrent inguinal hernia repairs over 15 years (2004-19). Electronic records of recurrent repairs were scrutinised to identify year and type of previous primary repair.

**Results**  
7234 repairs were performed during this time of which 289 (4%) were for symptomatic recurrence. Operations for primary repair increased year on year (111 in 2004 to 402 in 2019). Frequency of operation for recurrent herniation declined with increasing use of mesh (8.8% in 2004 to 3.5% in 2019). The majority of repairs (73%) for recurrence were by an open approach. A primary laparoscopic repair was associated with an earlier recurrence as opposed to an open mesh repair.

**Conclusion**  
Inguinal hernia repairs are increasing in frequency but operations for later symptomatic recurrence following an open primary prosthetic mesh repair are not.

**VP25** Preliminary results of a pilot observational study of PROMs for inguinal hernia repair

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**Introduction**  
PROMs reporting for inguinal hernia stopped in 2017 amid some controversy. Inguinal hernia repair continues to be at risk as CCGs have financial pressures and it is perceived as low clinical value. Local outcomes better allow for advocating. Routine follow up is not typical, so we were also interested to assess post-operative satisfaction.

**Aims**  
A pilot project was designed to determine an appropriate, simple methodology for PROMs data collection. No specific PROMs questionnaire exists for inguinal hernia. We used a combination of EQ-5D and items from the Carolinas Equation for QoL app (CeQOL) which had been used in pre-assessment.

**Method**  
The study consisted of single centre/single surgeon experience. Patients were prospectively recruited over 12 months. Patients completed pre-operative questionnaires and operative data was recorded. Follow up was at 6, 26, and 52 weeks.

**Results**  
70 patients were recruited (TAPP N=41, Open N=29), 18 failed any follow up. Currently followed up: 6 weeks N=52, 26 weeks N=38, 52 weeks N=27. Average post-operative satisfaction, surgeon recommended, and hospital recommended were high on 1-5 liner scale; 4.7, 4.8, 4.8 respectively. Significant results were demonstrated in the EQ-5D index at 6 weeks post op (0.853 to 0.861 p=0.04) and CeQOL at 12 months (8.68 to 5.04 p=0.006). Other results show gradual average improvement in EQ-5D VAS/INDEX over time. Free text comments were largely positive.

**Discussion**  
Overall results are encouraging. Linear CeQOL measurements show promise for evaluation of a service. With adjustments we aim to roll out this project for all surgeons in our organisation.

**VP26** Long term analysis of the evolution of practice and results of abdominal wall reconstruction by a single surgeon

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**Background**  
It is estimated that at least 12-15% of abdominal operations lead to incisional hernias, and Worldwide, evidence shows high rates of recurrence after surgical repair ranging from 12.7% in the Danish hernia registry to 23% in the Swedish registry.

**Methods**  
This is a retrospective analysis of the practice of a single surgeon at a tertiary centre. An electronic database provided all hernia surgeries done by the surgeon. A total of 185 patients with complete data were included who had open hernia repair. Electronic patient records were analysed to collect the data.

**Results**  
185 patients, with a median age of 57 years (IQR 68 – 49), and BMI of 31.14 (IQR 36.02 – 27.52), had a hernia recurrence rate of 15.6% (29/185). More than 80% of the cases were complex hernias with a European Hernia classification of M3 and/ or W3, with dense intestinal adhesions and multiple previous repairs. Variability in techniques and mesh evolved over this period, from anterior component separation to transversus abdominis release to achieve closure of the abdomen. Polypropylene meshes were used for non-contaminated or less complex cases. The use of biologics in the early years has been superseded by biosynthetic.

**Conclusion**  
The creation of the abdominal wall unit and subsequent MDT at this centre resulted in a rise of total procedures, complexity of cases and patients with significant co-morbidities. Specialised abdominal wall surgeons are associated with better results when performing complex abdominal wall reconstructions.
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References:
3. Additional References at the end of the instructional section.

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