Controversies in Hernia Surgery
1st International Conference

Colchester
25th–26th February 2015
It is a great pleasure to welcome you to the First Controversies in Hernia Surgery International Conference, which continues with the ICENI Centre’s “Controversies” conference brand. There is much in hernia surgery to discuss and we have a very distinguished faculty to address the complex decisions we have to make in practice – the place of laparoscopic and open approaches, the vexed issue of post-operative groin pain, new technology, prosthetic mesh, really difficult hernias, the management of complications and more.

As is usual at our controversies conferences all the sessions are plenary so there is no risk of missing anything or having to choose what to attend and what to miss.

There is time for discussion in every session so please contribute to the meeting by questioning our international faculty or challenging their views.

Mr Aman Bhargava
Programme Director

It is with great pleasure that I welcome you to the 1st Controversies in Hernia Surgery Conference at Stoke-By-Nayland, Colchester.

Management of Hernias has become increasingly complex as surgeons strive for better outcomes for patients in an environment where scrutiny of outcome data is the norm. The aim of the Conference is to provoke healthy debate about differing techniques and possible innovative methods to enhance patient outcomes.

This is the first Controversies in Hernia Surgery Meeting, which will bring together both national and international experts in hernia surgery to discuss the many complex issues facing surgeons today, and I welcome experts from the UK, the EU and the USA.

I hope the debates and discussions regarding these topics will both interest and inform you to improve patient outcomes and I hope you enjoy the venue and opportunity to network with delegates and Faculty.

Mr Aman Bhargava
Programme Director

The ICENI Centre

Welcome
to the 1st International Controversies in Hernia Surgery Conference
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Faculty

Mr Tan Arulampalam
Colchester General Hospital

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Nottingham University Hospitals NHS Trust

Mr David Bennett
Royal Bournemouth General Hospital

Prof Dieter Berger
Hospital Baden-Baden, Germany

Dr Frederik Berrevoet
University Hospital, Gent, Belgium

Mr Aman Bhargava
King George Hospital, Ilford

Dr Dieter Birk
Evangelisches Krankenhaus Zweibrücken, Germany

Prof Giampiero Campanelli
Multimedica Santa Maria Hospital, Varese, Italy

Mr Ian Daniels
Royal Devon & Exeter NHS Foundation Trust

Mr Michael Dworkin
Southend Hospital NHS Trust

Mr Pasquale Giordano
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Notre Dame Hospital, Tournai, Belgium

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Carolinas Medical Center, Carolina, USA

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Mr Manu Sood
Broomfield Hospital, Chelmsford

Mr Bruce Tulloh
Royal Infirmary and St John’s Hospital, Livingston

Dr Miguel Angel Garcia Urena
De Henares Hospital, Costads, Spain

Organising committee

Prof Roger Motson
Mr Aman Bhargava
Mr Tan Arulampalam
Daisy Martlew
Sarah Wilby
Tom Fryer
According to us, the answer is no. But each new device takes us closer. Zenapro, for instance, is the first hybrid hernia-repair device. A sheet of ultra-lightweight polypropylene mesh surrounded by extracellular matrix, Zenapro gives patients a permanent repair while leaving behind minimal foreign material in the body. Learn more: visit zenapro.cookmedical.com.

Question the norm. Do the tools you need exist today?
## Programme

### 1st International Controversies in Hernia Surgery Conference

#### 26 February – Day two

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<td>Short Paper Session</td>
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<td>09:00</td>
<td>Adjuncts to abdominal wall expansion for repair of complex incisional</td>
<td>Nasra N Alam</td>
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<td>09:10</td>
<td>hernia: a systematic review</td>
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<td>The decline in open inguinal hernia repair at a district general</td>
<td>Matthew Doe</td>
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<td>Adjuncts to abdominal wall expansion for repair of complex incisional</td>
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<td>hernia: a systematic review</td>
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<td>State of the Art Devices and Mesh</td>
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<td>10.00</td>
<td>State of the art devices and their use</td>
<td>Frederik Berrevoet (Belgium)</td>
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<td>Are biological meshes the way forward in hernia repair surgery?</td>
<td>Neil Smart (Exeter)</td>
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<td>Techniques in open repair</td>
<td>Aman Bhargava (UK)</td>
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<td>Use of biologics – Do they work?</td>
<td>Pasquale Giordano (UK)</td>
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<td>Closure of defects when stomas are present</td>
<td>Ian Daniels (UK)</td>
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<td>It’s all about selection and soft tissue complications</td>
<td>Manu Sood (UK)</td>
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<td>Non-permanent material options in difficult environments</td>
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<td>When the stomas are closed –is suture closure enough?</td>
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<td>Parastomal Hernia repair -laparoscopy - a gold standard?</td>
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<td>Perineal hernia prevention in ELAP</td>
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<td>Roger Motson (UK)</td>
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Proven technology with optimised design to save time and surgical stress in open ventral hernia fixation.
The decline in open inguinal hernia repair at a district general hospital: a training crisis?

Author
MJ Doe, JC Hopkins, MER Williamson

Introduction
Primary open inguinal hernia repair is a recognised core surgical training operation, and plays an important role in enabling the surgical trainee to develop basic general surgical competencies. To meet eligibility requirements to advance to higher surgical training, trainees should be competent to diagnose and manage a range of elective conditions, including primary abdominal wall hernias. Increasingly, community treatment centres are performing elective day-case NHS hernia operations, and the laparoscopic approach to elective hernia repair is also gaining popularity. We aim to quantify the decline in training opportunities in primary inguinal hernia repair, and offer potential solutions to this problem in a district general hospital.

Methods
Data on all inguinal hernia repairs performed between August 2003 and July 2014 was retrospectively acquired, using the SURGNET prospectively collected database. Operation notes for all procedures between August 2013 and July 2014 were then further assessed, with data collected on patient age, grade of performing surgeon and method of anaesthesia.

Results
Total numbers of inguinal hernia repairs performed per year almost halved over the eleven year period, from 461 (2003/4) to 245 (2013/14), with a gradual decline seen over the total time period. Numbers of laparoscopic procedures was seen to be more variable (R²=0.59). The decline in total operating numbers appeared to correspond to the opening of multiple local treatment centres, and the outsourcing of procedures to these institutions.

In 2013/14, 55 open inguinal hernia repairs were under general anaesthetic (GA), 25% local anaesthetic (LA), and 20% spinal anaesthetic. GA and spinal repairs, deemed appropriate for early stage surgical training were performed principally by consultant or associate specialist surgeons (54%), senior registrars (26%), junior registrars (11%) and least of all SHOs (9%).

Conclusions
Opportunities to perform primary open inguinal hernia repair have dramatically reduced following the opening of local NHS treatment centres and laparoscopic repair is still only offered for a small proportion of patients. The cases potentially suitable for training of core trainees, are predominately performed by more senior surgeons. In order to address this, forthrightly elective GA hernia training lists have been set up for core trainees. Trainee procedure numbers can now be prospectively audited, with the aim of improving competence and exposure to this essential core training procedure.

Adjuncts to Abdominal Wall Expansion for Repair of Complex Incisional Herniae: A Systematic Review

Authors
Miss Nasra Alam, Colorectal Research Fellow Mr Sunil K Narang, Colorectal Research Fellow Mr Samir Pathak, Specialist Registrar Mr Ian Daniels, Consultant Colorectal Surgeon Mr Neil Smart, Consultant Colorectal Surgeon

Exeter Surgical Health Services Research Unit (HeSRU), Royal Devon and Exeter NHS Foundation Trust, Barrack Road, Exeter, Devon EX2 5DW

Introduction
Incisional hernia is a common complication seen following laparotomy and is seen in 5-20% of patients at one year, rising to 22-4% at three years after surgery. Recurrence rates following primary repair range from 24% (mesh repair) up to 54% (lateral repair). Use of biological or synthetic mesh has been demonstrated to lower recurrence rates, although this is associated with a high risk of infection and co-morbidities.

Different adjuncts such as Preoperative Progressive Pneumoperitoneum (PPP), tissue expanders and more recently Botulinum toxin methods have been described in order to encourage primary fascial closure and to reduce the morbidity of abdominal wall reconstruction. However, there is little evidence in the literature supporting the use of these techniques for abdominal wall expansion. The object of this systematic review was to analyse all the available literature about adjuncts to abdominal wall expansion and compare the outcomes with regards to primary fascial closure rates, effect on reduction of abdominal wall expansion and compare the outcomes with regards to primary fascial closure rates, effect on reduction of abdominal wall expansion and compare with a high risk of infection and co-morbidities.

Methods
A systematic search of Pubmed and Embase databases was conducted using the search terms “Abdominal wall hernia”, “ventral hernia”, “midline hernia”, “botulinum toxin”, “botox”, “disport”, “progressive preoperative pneumoperitoneum” and “tissue expanders”. Study quality was assessed using the Methodological Index for Non-Randomised Studies (MINORS).

Results
Out of the 105 studies identified, 24 met the inclusion criteria. PPP was performed in 274 patients across 15 studies with primary fascial closure being achieved in 228 (83.2%). Of the patients that achieved fascial closure, 18 patients had a recurrence (7.9%) although 3 studies did not report recurrence rates. The complication rate was 12% with subcutaneous emphysema being the most common complication (5.8%), and 2 mortalities were reported. There were 6 studies identified with 21 patients in total undergoing abdominal wall expansion using tissue expanders with a fascial closure rate of 90.5% (n=19). A recurrence rate of 10.5% (n=2) was reported with 2 complications (1 ruptured and 1 infected expander) and no mortalities. Follow up ranged from 3 months to 36 months across the studies. There were 3 studies reporting the use of botulinum toxin with 47 patients in total. A primary fascial closure rate of 93.6% (n=44) was demonstrated although a combination of techniques including component separation and Rives repair were used. There were no reported complications related to the use of Botulinum Toxin.

Conclusions
PPP, tissue expanders and Botulinum toxin are feasible adjuncts in abdominal wall expansion prior to complex incisional hernia repair and are associated with low morbidity and mortality rates. The use of adjuncts appear to reduce the recurrence rates compared to conventional surgical repair. However, the studies identified were of varying quality and consisted predominantly of case series. This systematic review of literature highlights the need for comparative studies in the use of adjuncts in complex incisional hernia repair.

Paraurostomy hernia following radical cystectomy and ileal conduit diversion for urinary bladder cancer.

Authors
Mr Sunil K Narang, Colorectal Research Fellow Miss Nasra Alam, Colorectal Research Fellow Mr Nick Campano, Urology Research Fellow Mr John McGrath, Consultant Urologist Mr Ian Daniels, Consultant Colorectal Surgeon Mr Neil Smart, Consultant Colorectal Surgeon

Exeter Surgical Health Services Research Unit (HeSRU), Royal Devon and Exeter NHS Foundation Trust, Barrack Road, Exeter, Devon EX2 5DW

Introduction
Paraurostomy hernia is the most frequent complication associated with abdominal wall stoma occurring in up to 50% of patients. Urostomy is not comparable to ileostomy or colostomy due to the difference in consistency of the effluent from the stoma and the stoma aperture size. It is not clear if the high incidence of paraocolostomy and paraileostomy herniae within the first two years of surgery can be extrapolated to paraurostomy herniae. The aim of this study was to evaluate the incidence of paraurostomy hernia following open radical cystectomy and ileal conduit formation for bladder cancer in a single centre.

Methods
Paraurostomy hernia was diagnosed on follow up CT Scans for eight patients (35%) with Moreno-Matias grading ranging from 1b-3. The median time to diagnosis, either clinical or radiological, of paraurostomy hernia was 17 months (Range 9-25 months). Only one patient required repair of the paraurostomy hernia with porcine dermal collagen mesh in the retro rectus position. This hernia recurred 18 months later and patient had further surgery for resiting the ileal conduit and closure of the original stoma site.

Conclusions
The incidence of paraurostomy hernia is similar to paraocolostomy and paraileostomy herniae. Approximately, one-third of patients who are followed up at three years will have developed a paraurostomy hernia following radical cystectomy and ileal conduit diversion. Patients should be appropriately counselled prior to the procedure regarding the risk. Not all patients with a confirmed diagnosis of paraurostomy hernia will need to undergo a surgical intervention, which is generally reserved for symptomatic patients who have failed conservative stoma nursing care.
Laparoscopic Incisional/Ventral hernia repair with suture closure

Authors: Benedetta Zappa, Lorik Begolli, Sahal Qureshi, Aman Bhargava

King George Hospital, Department of General Surgery, Essex, UK

Purpose
Various techniques have been used in laparoscopic incisional and ventral hernia repair (LIVHR). The aim of this study was to evaluate the outcomes of our one-year experience of laparoscopic suture closure in patients undergoing laparoscopic incisional/ventral hernia repair.

Methods
The technique consists of closing the defect with transcutaneous suture deployment via direct access using an Endoclose (Covidien) device. Laparoscopic incisional ventral hernia repair then proceeds with intraperitoneal mesh deployment by using Physiomesh (Ethicon) and is then secured using Protack (Covidien) with double crown technique.

Results
Endpoints were recurrence of the hernia, patient satisfaction, seroma/haematoma formation and pain.

Conclusion
We believe this technique is effective, reliable and reproducible, with appropriate training and in experienced hands. This procedure can further improve patient's clinical and satisfaction outcomes for laparoscopic incisional/ventral hernia repair.

Paraurostomy hernia following cystectomy and ileal conduit diversion: a Systematic Review

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Email: n.smart@nhs.net

Purpose
Paraurostomy hernia (PH) is a common complication following cystectomy and ileal conduit urinary diversion. Urostomy is not comparable to ileostomy or colostomy due to the difference in the consistency of the effluent from the stoma and the stoma aperture size. Prevalence and risk factors for the development of paraurostomy hernia have been inadequately reported in the literature.

Methods
A systematic review of the literature was performed and the Cochrane, EMBASE and Pubmed databases were searched from January 1985 to November 2014. All peer reviewed articles that investigated occurrence of paraurostomy hernia and associated risk factors were included for analysis. Conference abstracts, letters, technical notes and commentaries were excluded. The primary outcome measure was the rate of development of PH in relation to the length of follow up.

Results
Using the search criteria, 55 articles were originally identified. Nine articles were included for final analysis. Sample sizes ranged from 39 to 514 patients with a pooled total of 2654 undergoing ileal conduit external urinary diversion for benign and malignant conditions. Up to 40% of patients had symptoms from their PH and the mean length of time for clinical or radiological diagnosis was 44 months. Follow up periods ranged from 0 to 354 months. The rate of development of PH ranged from 13.9%–40% in patients undergoing ileal conduit. Only selected patients with a symptomatic PH (9-45%) were offered repair and the rate of recurrence of PH was high (22%-50%). Not all studies included in our review assessed the role of various technical and patient related factors contributing to the high incidence of PH. Female gender, high BMI, low preoperative albumin and previous laparotomy were significantly associated with the development of PH in two studies.

Conclusion
Overall, the systematic review shows that the incidence of PH is high although the majority of hernias remain asymptomatic. Diagnosis of PH depends on the length of clinical follow up and the use of cross sectional imaging in follow up after cancer resections. Of the symptomatic PH, only a small subgroup of patients are suitable for operative repair and most symptomatic patients are treated conservatively with either symptom management or abdominal support devices. The recurrence rates following repair of PH remains substantial. Appropriate patient selection and adherence to meticulous surgical technique are of paramount importance in preventing development of PH. Identifying those at greatest risk may permit use of prophylactic mesh in selected patients at the time of the initial surgery.

Keywords
Urostomy, ileal conduit, morbidity, parastomal hernia

Upcoming courses:

Transanal Total Mesorectal Excision Masterclass with cadaveric simulation

- Patient selection
- Theatre set-up
- Operative technique
- Controversies
- Maximum 10 delegates
- 1 trainer and 2 delegates per cadaver

Endpoints were recurrence of the hernia, patient satisfaction, seroma/haematoma formation and pain.

Results
There have been no recurrences in a median follow up of 6 months, range between 1 year and a half and 2 months postoperative and pain was not a recognizable side-effect. The hospitalization period for these cases was within our parameters as assessed previously.

Patients were really satisfied with improved quality of life, they return to normal daily activity approximately after one month from surgery.

Conclusion
We believe this technique is effective, reliable and reproducible, with appropriate training and in experienced hands. This procedure can further improve patient’s clinical and satisfaction outcomes for laparoscopic incisional/ventral hernia repair.

1 trainer and 2 delegates per cadaver

Maximum 10 delegates

To book your place please contact:

Daisy Martlew, Anglia Ruskin University
E-mail: daisy.martlew@anglia.ac.uk
Tel: 01245 686791
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9–20 May
7–8 October
1–2 December

Venue: Evelyn Surgical Training Centre, Cambridge

Course fee: £1000