British Association of Paediatric Endoscopic Surgeons

13th Annual Scientific Meeting and Workshop

Glasgow, Scotland

19th – 21st November 2012

Royal Hospital for Sick Children and Royal College of Physicians and Surgeons of Glasgow
<table>
<thead>
<tr>
<th><strong>Programme Committee</strong></th>
<th><strong>Workshop Faculty</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ewan Brownlee</td>
<td>Niyi Ade-Ajayi - London</td>
</tr>
<tr>
<td>Abraham Cherian</td>
<td>Naved Alizai - Leeds</td>
</tr>
<tr>
<td>Graham Haddock</td>
<td>Simon Clarke - London</td>
</tr>
<tr>
<td>Atul Sabharwal</td>
<td>Joe Curry - London</td>
</tr>
<tr>
<td></td>
<td>Alastair Dick - Belfast</td>
</tr>
<tr>
<td></td>
<td>Robin Garrett-Cox – Bristol</td>
</tr>
<tr>
<td></td>
<td>Munther Haddad – London</td>
</tr>
<tr>
<td><strong>Organising Committee</strong></td>
<td></td>
</tr>
<tr>
<td>Naved Alizai</td>
<td>Sean Marven – Sheffield</td>
</tr>
<tr>
<td>Abraham Cherian</td>
<td>Fraser Munro – Edinburgh</td>
</tr>
<tr>
<td>Simon Clarke</td>
<td>Mike Stanton – Southampton</td>
</tr>
<tr>
<td>Alastair Dick</td>
<td>Thomas Tsang – Norwich</td>
</tr>
<tr>
<td>Sean Marven</td>
<td>Gregor Walker – Glasgow</td>
</tr>
<tr>
<td>Atul Sabharwal</td>
<td></td>
</tr>
<tr>
<td>Henrik Steinbrecher</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Abstract Scoring Panel</strong></td>
<td></td>
</tr>
<tr>
<td>Ross Craigie – Manchester</td>
<td></td>
</tr>
<tr>
<td>Chris Driver – Aberdeen</td>
<td></td>
</tr>
<tr>
<td>Phil Hammond – Glasgow</td>
<td></td>
</tr>
<tr>
<td>Sean Marven – Sheffield</td>
<td></td>
</tr>
<tr>
<td>Henrik Steinbrecher – Southampton</td>
<td></td>
</tr>
<tr>
<td>Thomas Tsang – Norwich</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Prize Committee</strong></td>
<td></td>
</tr>
<tr>
<td>Ashish Desai – London</td>
<td></td>
</tr>
<tr>
<td>Phil Hammond – Glasgow</td>
<td></td>
</tr>
<tr>
<td>James Morecroft – Manchester</td>
<td></td>
</tr>
<tr>
<td>Contents</td>
<td>Page(s)</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Welcome</td>
<td>2</td>
</tr>
<tr>
<td>Glasgow</td>
<td>3</td>
</tr>
<tr>
<td>Programme Overview</td>
<td>4-7</td>
</tr>
<tr>
<td>- Workshop</td>
<td>4</td>
</tr>
<tr>
<td>- Scientific Meeting</td>
<td>5-6</td>
</tr>
<tr>
<td>- Interactive Operating Room Sessions</td>
<td>7</td>
</tr>
<tr>
<td>Scientific Sessions</td>
<td>8-16</td>
</tr>
<tr>
<td>- Urology</td>
<td>8-9</td>
</tr>
<tr>
<td>- General/GI</td>
<td>9-11</td>
</tr>
<tr>
<td>- Miscellaneous</td>
<td>11-13</td>
</tr>
<tr>
<td>- Thoracoscopic/SILS/NOTES</td>
<td>13-14</td>
</tr>
<tr>
<td>- Posters</td>
<td>14-16</td>
</tr>
<tr>
<td>Abstracts</td>
<td>17-63</td>
</tr>
<tr>
<td>- Urology</td>
<td>17-22</td>
</tr>
<tr>
<td>- General/GI</td>
<td>23-34</td>
</tr>
<tr>
<td>- Miscellaneous</td>
<td>35-44</td>
</tr>
<tr>
<td>- Thoracoscopic/SILS/NOTES</td>
<td>45-53</td>
</tr>
<tr>
<td>- Posters</td>
<td>53-63</td>
</tr>
<tr>
<td>BAPES Annual Dinner</td>
<td>64-65</td>
</tr>
<tr>
<td>Sponsors</td>
<td>66-68</td>
</tr>
</tbody>
</table>
Dear Colleagues,

I would like to extend a warm welcome to you and thank you for attending and participating at the 13th Annual Meeting of the British Association of Paediatric Endoscopic Surgeons in Glasgow. As a city Glasgow is not only renowned for its contribution to medicine but also for the friendliness of Glaswegians.

As a change to recent BAPES meetings the 3 days of this meeting encompass distinct themes on each day. I hope this will provide a stimulating and enjoyable educational experience for all delegates and faculty.

The first day at the Royal College of Physicians & Surgeons of Glasgow will be a full day workshop. I am delighted that we have been able to enlist the expertise of 12 faculty members from all around the UK giving a ratio of 1:2 faculty:delegates in our wet and dry labs. This is followed by the scientific day which will include 2 keynote lectures and a debate. 53 abstracts were received from far afield and the 4 oral sessions will incorporate 35 presentations. 10 papers will be presented as posters. The final day takes place at the Royal Hospital for Sick Children, Glasgow. During an interactive session 2 procedures will be presented from “patient positioning” to “wound closure” followed by a session discussing operative complications and troubleshooting techniques. The final session is a unique opportunity to witness a live simulated misadventure during surgery and assess the steps taken by the theatre team to deal with a developing clinical situation.

Glasgow is well known as the curry capital of the UK and we hope you will take the opportunity to join us for the Annual Meeting Dinner at the award winning Bukharah restaurant. Graham Haddock and I wish you a pleasant stay during this meeting and if you require any assistance during the meeting please do not hesitate to ask either Graham or me or indeed members of the BAPES executive.

Atul Sabharwal
Honorary Secretary, BAPES
Glasgow is the largest city in Scotland and third most populous in the United Kingdom. The city is situated on the River Clyde in the country's West Central Lowlands. Glasgow grew from a small rural settlement on the River Clyde to become one of the largest seaports in Britain. Expanding from the medieval bishopric of Glasgow and the later establishment of the University of Glasgow in the 15th century, it became a major centre of the Scottish Enlightenment in the 18th century. From the 18th century the city also grew as one of Britain's main hubs of transatlantic trade with British North America and the British West Indies. With the onset of the Industrial Revolution, the population and economy of Glasgow and the surrounding region expanded exponentially to become one of the world's pre-eminent centres of heavy engineering; most notably in the shipbuilding and marine engineering industry, which produced many innovative and famous vessels. Glasgow was known as the "Second City of the British Empire" for much of the Victorian era and Edwardian period. Today it is one of Europe's top ten financial centres and is home to many of Scotland's leading businesses. Glasgow is also ranked as the 57th most liveable city in the world.

In the late 19th and early 20th centuries Glasgow grew in population, eventually reaching a peak of 1,128,473 in 1939, and was the fourth-largest city in Europe, after London, Paris and Berlin. In the 1960s, comprehensive urban renewal projects resulting in large-scale relocation of people to new towns and peripheral suburbs, followed by successive boundary changes, have reduced the current population of the City of Glasgow council area to 592,000, with 1,199,629 people living in the Greater Glasgow urban area. The entire region surrounding the conurbation covers approximately 2.3 million people, 41% of Scotland's population. Glasgow will host the 2014 Commonwealth Games and is currently bidding to host the 2018 Summer Youth Olympics.
Programme Overview

Monday 19th November Workshop
Royal College of Physicians & Surgeons of Glasgow

0830 - 0930  Registration
0930 - 1000  Introduction to skills labs
1000 - 1130  Workshops
1130 - 1150  Refreshment Break
1150 - 1320  Workshops
1320 - 1415  Lunch
1415 - 1545  Workshops
1545 - 1615  Refreshment Break
1615 - 1730  Workshops
1730 - 1745  Feedback and Close
1930  Faculty Dinner
Tuesday 20th November Scientific Meeting
Royal College of Physicians & Surgeons of Glasgow

0800-0900    Registration

0900-0905    Welcome and opening remarks
    Mr Graham Haddock

0905-0955    Scientific Session (i) Urology
    Chaired by: Mr Stuart O'Toole & Miss Marie-Klaire Farrugia

0955-1030    Debate
"This association believes that competence should be demonstrated on a simulator before a given laparoscopic procedure is performed on a patient"
    For: Mr Simon Blackburn; Against: Mr Constantinos Hajivassiliou

1030-1100    Refreshment Break

1100-1230    Scientific Session (ii) General/GI
    Chaired by: Mr Isaac Philip & Dr Vladimir Cingel

1230-1300    Keynote Speaker (i)
    Laparoscopic Surgery in Animals
    Mr Romain Pizzi, Veterinary Surgeon

1300-1350    Lunch

1350-1420    Poster session
    Chaired by: Mr Simon Clarke
1420-1545  Scientific Session (iii) **Miscellaneous**  
*Chaired by: Mr Azad Najmaldin & Mr Govind Murthi*

1545-1600  Refreshment Break

1600-1630  Keynote Speaker (ii)  
*Colorectal Surgery: What can we learn from the big boys?*  
*Mr Andrew Renwick, Consultant General Surgeon*

1630-1725  Scientific Session (iv) **Thoracoscopic/SILS/NOTES**  
*Chaired by: Mr Fraser Munro & Mr Carl Davis*

1730-1740  Prizes and Closing Remarks

1740-1830  **BAPES AGM**

1930  Annual Dinner (*Bukharah*)
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>0830 - 0930</td>
<td>Registration</td>
</tr>
</tbody>
</table>
| 0930 - 1100 | Retroperitoneoscopic Heminephrectomy  
*Mr Stuart O'Toole* |
| 1100 - 1130 | Refreshment Break                                        |
| 1130 - 1300 | Thoracoscopic Right Lower Lobectomy  
*Mr Atul Sabharwal* |
| 1300 - 1400 | Lunch                                                     |
| 1400 - 1445 | Simulation session                                       
*Mr Sean Marven & Mr Gregor Walker* |
| 1445 - 1515 | Feedback with theatre personnel                           |
| 1515 - 1545 | Refreshment break                                        |
| 1545 - 1645 | Videos: Complications and Unexpected Findings             |
| 1645 - 1650 | Close                                                     |
Scientific Sessions

Session 1 – Urology

U1: 0905-0915  Minimally Invasive Dismembered Pyeloplasty
Mr Ewan M Brownlee, Mr Gordon A MacKinlay, Mr Jimmy P H Lam
Royal Hospital for Sick Children, Edinburgh

U2: 0915-0922  Surgical Technique: Utriculus Masculinum Excision By A Laparoscopic-Cystoscopic Approach
Yankovic F, Scuderi M, Smeulders N
Great Ormond Street Hospital NHS trust

U3: 0922-0929  Cystoscopy assisted laparoscopic lower urinary tract surgery: Description of a novel technique and report of two cases
Stephens L, Goyal A, Hennayake S
Department of Paediatric Urology, Royal Manchester Children’s Hospital

U4: 0929-0939  Multidisciplinary Paediatric Percutaneous Nephrolithotomy National Service: The 20 Year Scottish Experience
Lucy Sedgewick, Charles Keys, Sami Moussa, Ben Thomas, Gordon Smith, Julian Keanie, Jimmy Lam
Royal Hospital for Sick Children, Edinburgh and National Lithotripsy Centre, Western General, Edinburgh

U5: 0939-0946  The advantages of a transperitoneal laparoscopic approach in a suspected pelvic MCDK
Costa Healy, Anies Mahomed
Royal Sussex Children's Hospital, Brighton
All is not lost: Gubernaculum-Sparing Two Stage Laparoscopic Fowler-Stephens Orchidopexy for an Intra-Abdominal Testis with Absent Vas

Stephens L, Goyal A

Department of Paediatric Urology, Royal Manchester Children’s Hospital

Session 2 – General/GI

G1: 1100-1110 Comparison of long-term outcome between open and laparoscopic Thal fundoplication in children

Dr Rainer Kubiak, Mrs Elena Böhm-Sturm, Dr Daniel Svoboda, Prof Lucas Wessel

Department of Paediatric Surgery; Mannheim Medical School (UMM), Germany

G2: 1110-1117 The Effect Of Gastrotomy On Retching In Neurologically Impaired And Neurologically Normal Children Following Laparoscopic Nissen Fundoplication: A Retrospective 7 Year Cohort

Mr Khaled Abdelaal, Mr Thomas T Tsang, Dr Catalin Lupu

Norwich & Norfolk University Hospitals

G3: 1117-1124 Buried Peg Bumper: New Trick For Old Problem

Atif Saeed, Marcin Kazmierski, Adil Aslam

Addenbrooke’s Hospital, Cambridge University Hospitals NHS Foundation Trust

G4: 1124-1131 Gastric Trichobezoar: A Laparoscopic-Assisted Technique

Edward Tudor, Claire Clark

Royal Hospital for Sick Children, Edinburgh
G5: 1131-1138  Pylorostenosis – Experience In Laparoscopic Pyloromyotomy
A Kujawska, B Kotkowicz, M Puliński, M Szostawicki, W Choiński
The Department of Paediatric Clinical Surgery at the University of Warmia and Mazury in Olsztyn

G6: 1138-1145   Laparoscopic duodenojejunostomy for duodenal obstruction secondary to gross scoliosis
B Bekdash, RM Lindley, SS Marven
Sheffield Children’s Hospital

G7: 1145-1152   Combined laparoscopic and endoscopic evaluation of small bowel diaphragm disease
B Bekdash, G Soccorso, SS Marven, MA Thomson
Sheffield Children's Hospital

G8: 1152-1159   Minimally invasive approaches to pediatric inflammatory bowel disease
B Bekdash, R Slater, GV Murthi
Sheffield Children’s Hospital, Rotherham District General Hospital

G9: 1159-1206   The Clinical Utility Of Laparoscopy In The Management Of Impalpable Testes In Pediatric Age Group
Mr M Alabdullah
QMC Hospital, Nottingham, UK

G10: 1206-1213   Should Paediatric Laparoscopic Cholecystectomy only be Performed in high volume centres?
BSR Allin, MJ Haddad, SA Clarke
Chelsea & Westminster Hospital, London
G11: 1213-1220  Laparoscopic Assisted Anorectal Pull-Through For High Imperforate Anus: Eleven Years Experience
Ruggeri Giovanni, Gargano Tommaso, Maffi Michela, Destro Francesca, Cantone Noemi, Lima Mario
Policlinico S Orsola Malpighi Department of Pediatric Surgery, University of Bologna

G12: 1220-1230  Primary Laparoscopic-Assisted Endorectal Colon Pull-Through For Hirschsprung’s Disease: A 12 Years Experience
Ruggeri Giovanni, Gargano Tommaso, Maffi Michela, Destro Francesca, Mogiatti Mirella, Cantone Noemi, Lima Mario
Paediatric Surgery Department – University of Bologna. Policlinico S. Orsola – Ospedale Maggiore

Session 3 – Miscellaneous

M1: 1420-1430  High Definition Laparoscopy Reduces The Incidence Of Hydrocele After Laparoscopic Varicocelectomy
Balazs Bota, Balazs Kutasy, Ganapathy Laxamanadass, Manuela Hunziker, Prem Puri
The National Children’s Hospital, Dublin, Ireland

M2: 1430-1440  The Evolution Of A ‘Take Home’ Laparoscopic Simulator And Curriculum Of Simulated Skills
RW Partridge, I Hennessey, P Brennan, M Hughes, A Sabharwal
Royal Hospital for Sick Children, Edinburgh

M3: 1440-1447  Surgical Technique: Retroperitoneoscopic Approach For Adrenal Masses In Children
Yankovic F, Brain C, Sebire N, Sakoda A, Marks S, Mushtaq I
Great Ormond Street Hospital NHS trust
M4: 1447-1454  Natural orifice endoscopic incision of a fenestrated duodenal membrane at 18 months

B Bekdash, SS Marven, MA Thomson

Sheffield Children's Hospital

M5: 1454-1501  Laparoscopic Management Of Intra Abdominal Testis: How Often Do We Divide The Vessels?

Mr Pankaj Kumar Mishra, Miss Charlotte Holbrook, Mr Thomas Tsang

Norfolk Norwich University Hospital NHS Trust

M6: 1501-1511  Gastrostomy Buttons: Does Size (or Shape) Matter?

James Andrews, Gregor Walker

Royal Hospital for Sick Children, Glasgow

M7: 1511-1518  VORTEX: Videoscopic Orthopaedic Resection of Thoracic EXostoses

Teague WJ, Porter DE, Fouad D, Munro FD

Royal Hospital for Sick Children, Edinburgh

M8: 1518-1528  Laparoscopic Pyloromyotomy: A Restored Surgical Training Opportunity

Teague WJ, Lam JPH, Clarke MC, McHoney MC, McCabe AM, Wilson-Storey D, MacKinlay GA, Munro FD

Royal Hospital for Sick Children, Edinburgh

M9: 1528-1538  Laparoscopic Excision Of Choledochal Cyst With Hepaticojejunostomy

Cingel V, Duchaj B, Babala J, Zábojníková L, Fuňáková M, Petrík M, Trnka J

Department of Paediatric Surgery, University Children’s Hospital Bratislava, Slovakia
M10: 1538-1545  The ‘Double Hitch’ Manoeuvre In Laparoscopic Pyeloplasty - Early Experience

Abraham Cherian

Great Ormond Street Hospital for Children NHS Foundation Trust

Session 4 – Thoracosopic/SILS/NOTES

T1: 1630-1640  Implantation Of A Nuss Bar Under Thoracosopic Guidance In Children Patients With Pectus Excavatum


Department of Paediatric Surgery University Children’s Hospital Bratislava, Slovakia

T2: 1640-1647  Thoracosopic Surgery For Spontaneous Pneumothorax In Children

Ravindar Anbarasan, Dakshesh Parikh, Michael Singh

Birmingham Children’s Hospital

T3: 1647-1654  Minimal access Approach to large Esophago - Gastric Duplication cyst

Ms Anu Paul, Mr Ashish Desai, Mr Niyi Ade-Ajayi

King's College Hospital, London

T4: 1654-1701  Technicalities Of Thoracosopic Excision Of A Pig’s Bronchus

Michael Singh, Melissa Short, Dakshesh Parikh

Birmingham Children's Hospital NHS Foundation Trust
Minimally Invasive Thoracic Surgery. Institutional Experience

Gargano Tommaso, Ruggeri Giovanni, Maffi Michela, Mazzerò Giosuè, Cantone Noemi, Carlini Veronica, Lima Mario

Paediatric Surgery Department – University of Bologna. Policlinico S. Orsola – Ospedale Maggiore

SILS concomitant cholecystectomy and Splenectomy in Patient with Hereditary Spherocytosis

Zabojnikova L, Cingel V, Duchaj B, Babala J

Dpt. of Paediatric Surgery, University Children’s Hospital, Bratislava, Slovakia

Is Single Port Surgery Feasible After Liver Transplant?

Augusto Zani, Anu Paul, Ashish P Desai

Department of Paediatric Surgery, King’s College Hospital, London

Posters

P1: Evolution Of An Inflammatory Bowel Disease Service: The Role Of Laparoscopy

Ms Anu Paul, Dr Babu Vadmalayan, Mr Ashish Desai, Mr Niyi Ade-ajayi

King's College Hospital, London

P2: Ganglioneuromatosis of intestine - management dilemma and Single port Subtotal colectomy

Ms Anu Paul, Ms Abigail Katy Khoo, Dr Babu Vadmalayan, Mr Ashish Desai

King's College Hospital, London, UK
P3: Colonoscopic Assisted Trephine Stoma (CATS) In Children With Chronic Constipation

Mr BJ MacCormack, Mr WA McCallion
Royal Belfast Hospital for Sick Children

P4: An Innovative Technique For Peg To Button Gastrostomy Change

Costa Healy, A Mahomed
Royal Alexandra Children's Hospital, Brighton, UK

P5: Laparoscopic Management Of Auto-Amputated Ovarian Cysts In Infants: Current Status

CK Sinha¹, A Joshi¹, A Cherian²
¹-The Royal London Hospital, London, 2- GOS Hospital for Children, London

P6: Voluminous "Cobra-Head" Stone In A Duplex System Ureterocele

Scuderi M, Featherstone N, Yankovic F, Smeulders N.
Great Ormond Street Hospital NHS trust

P7: Renal Stones In Children Under The Age Of 2 Years

Georgina Malakounides, Alex Barnacle, William Van’t Hoff, Simon Choong, Naima Smeulders
Great Ormond Street Hospital, London

P8: Harmonic Scalpel In Laparoscopic Heminephrectomy: Safety And Efficacy

Nishat Rahman, Abraham Cherian
Great Ormond Street Hospital for Children NHS Foundation Trust
P9: Late Presenting Iatrogenic Diaphragmatic Hernia In A Child After Laparoscopic Splenectomy

Thea L Rogers, Simon Scammell, Basil Bekdash, Prasad P Godbole, Sean S Marven

Sheffield Childrens Hospital and Sheffield Medical School

P10: Laparoscopy For Non-Palpable Testes: Single Centre Experience

Maurizio Pacilli, Clara Yiu, Martyn Williams, Daniel Carroll, Nicola Smith, Claire Jackson, Adil Aslam

Cambridge University Hospital
Abstracts
Session 1 – Urology

U1: 0905-0915  Minimally Invasive Dismembered Pyeloplasty

Mr Ewan M Brownlee, Mr Gordon A MacKinlay, Mr Jimmy P H Lam
Royal Hospital for Sick Children, Edinburgh

Aim: To review outcomes of patients undergoing minimally invasive
dismembered pyeloplasty (via transperitoneal approach for re-do surgery
and in infants <15kg, and via retroperitoneoscopic approach in children
>15kg).

Methods: Retrospective review of all patients undergoing minimally
invasive dismembered pyeloplasty. Single centre. February 2009 to April
2012. Data collected from locally held electronic databases.

Results: 41 cases identified: 18 (44%) antenatal hydronephrosis; 21 (51%)
symptomatic; 24 (59%) left sided procedure; 18 (44%) female. 11 (27%)
patients had function <40%, and 17 (41%) had function <45%. Renal pelvic
diameter >30mm in 21 (51%) and, in those <30mm, hydronephrosis always
associated with marked calyceal dilatation. Median age, weight, operative
time and post-operative stay were: 9 months, 9.5kg, 145mins and 2 days
transperitoneally (19 patients); 8 years, 29kg, 195mins and 2 days
retroperitoneoscopically (22 patients). Symptoms resolved in 21 (100%)
patients post-operatively. All patients had a ureteric stent for 6 weeks
post-operatively then an USS at median of 4 months post-operatively
demonstrating median reduction in pelvic diameter of 15mm. MAG3
renogram, performed at median of 7 months post-op in 38 (93%) patients
to date, revealed maintained or improved function in all patients (100%)
and improved drainage in 31 (97%). 1 patient (2%) required further surgery
(balloon endopyelotomy).

Conclusions: In our experience, minimally invasive dismembered
pyeloplasty is a safe and effective operation resulting in improved renal
pelvic dilatation and drainage. For infants <15kg, in whom the
retroperitoneal space is limited, or for re-do surgery, the transperitoneal
approach is a viable alternative with equally good results.
U2: 0915-0922  Surgical Technique: Utriculus Masculinum
Excision By A Laparoscopic-Cystoscopic Approach

Yankovic F, Scuderi M, Smeulders N

Great Ormond Street Hospital NHS trust

Aim: A utriculus masculinum is encountered in 12% of hypospadias (Shima et al J Urol 1979). However, patients rarely present with symptoms (post-void incontinence or infection). We describe a combined laparoscopic-cystoscopic approach to overcome the challenge posed by the location of the utriculus deep within the pelvis and to accurately identify the confluence of the utriculus with the urethra.

Methods: The patient was positioned supine in lithotomy. Following initial cystoscopy (Storz 9.5Fr), a 10Fr urethral catheter was placed into the bladder. A Hassan port was placed at the umbilicus (Storz 5mm 30 degree) and 5mm working ports in the right and left iliac fossae. Simultaneous utriculoscopy enabled diathermy-scissor dissection under guidance of transillumination. The cystoscope was then retracted to the urethral-utricular convergence. Two endo-loops were placed 5 mm above the confluence with the urethra. While the right vas could be preserved, on the left the vas terminated in a vascular nodule connected to a horn on the left lateral aspect of the utriculus. This was excised with the utriculus and removed through the umbilical port. The urethral catheter was removed 1 week later.

Results: A 12 year-old boy with Williams syndrome and previous hypospadias surgery presented with severe new-onset post-void incontinence. Diagnostic cystoscopy demonstrated a good callibre urethra, but the previously-wide utricular orifice to be partially-occluded by prostatic growth.

At 2 months follow-up, the patient is asymptomatic.

Conclusions: A combined laparoscopic-cystoscopic approach facilitates the delineation of the utriculus and allows its confluence to the urethra to be accurately determined.
Cystoscopy assisted laparoscopic lower urinary tract surgery: Description of a novel technique and report of two cases

Stephens L, Goyal A, Hennayake S

Department of Paediatric Urology, Royal Manchester Children’s Hospital, Oxford Road, Manchester, M13 9WL

Introduction: Cystoscopy has been used during laparoscopic lower genito-urinary tract surgery to assist in identification and dissection of structures. We have used CO2 insufflation via the cystoscope, as fluid leaking into the peritoneal cavity can compromise dissection when using conventional cystoscopy.

Methods: The technique was used in 2 cases, a 12-year-old boy presenting with recurrent UTI with a bladder diverticulum adjacent to the left vesico-ureteric junction, and a 10-year-old boy presenting with post-micturition incontinence with a large prostatic utricle pouch. In the Lloyd Davies position, a 10mm umbilical port and two other 5mm ports were used for laparoscopy with a 30-degree camera, and a 10fr cystoscope was used with 2 monitors. For both laparoscopy and cystoscopy, CO2 was used at a pressure of 10mm Hg. Dissection was done on the wall of the structure to prevent collateral damage. The diverticulum and the prostatic utricle were excised completely. In both cases post-operative cystogram showed complete excision and both patients became asymptomatic.

Conclusion: Bladder diverticula and prostatic utricles are located deep in the pelvis, often closely associated with the ureter and the vas respectively. It is difficult to assess the excision margins clearly with a laparoscope alone. Conventional cystoscopy has been used to assist laparoscopy to allow for easier identification and dissection. However, once the structure is breached, either during dissection or excision, water enters the peritoneal cavity obscuring the view. Our technique avoids this while allowing accurate dissection. This technique could be applied to other lower genito-urinary tract pathologies.
U4: 0929-0939  Multidisciplinary Paediatric Percutaneous Nephrolithotomy National Service: The 20 Year Scottish Experience
Lucy Sedgewick, Charles Keys, Sami Moussa, Ben Thomas, Gordon Smith, Julian Keanie, Jimmy Lam
Royal Hospital for Sick Children, Edinburgh and National Lithotripsy Centre, Western General, Edinburgh
Aims: Renal stones in children are rare. Services to treat these patients are therefore organised in supraregional centres to concentrate expertise and improve standards. This multidisciplinary team includes adult radiologists, adult urologists, paediatric urologists and ancillary staff. We report our national experience over the last 20 years in this minimally invasive method of kidney stone treatment.
Methods: We performed a retrospective casenote and radiology review. We report patient demographics, rate of stone clearance and complications.
Results: We treated 53 patients with 85 PCNL episodes. There were 27 females and 26 males. Laterality was right in 34 and left in 19 patients. Aetiology of stone formation was infection in 17, metabolic in 13 and not known in 23 patients. An anatomical renal tract anomaly was identified in 14 patients.
15 patients required further procedures for either inadequate stone clearance or subsequent stone formation. Of these 15 patients 8 had metabolic and 3 had anatomical conditions which predisposed them to stone formation.
We report no major complications. Complications included 4 episodes of urosepsis, 4 prolonged leaks form the nephrostomy site, 4 renal pelvis tears and 1 bleed.
Conclusions: Our multidisciplinary national PCNL service provides a safe and effective service for paediatric renal stones.
The advantages of a transperitoneal laparoscopic approach in a suspected pelvic MCDK

Costa Healy, Anies Mahomed

Royal Sussex Children's Hospital, Brighton

Background: The operative approach to multicystic dysplastic kidney (MCDK) is either retro or transperitoneal and there are advantages to both techniques. The distal ureter is frequently atretic and dissection to the bladder base is rarely required.

Aim: Described is a case of a 6 year old male patient with a suspected pelvic MCDK diagnosed on preoperative DMSA/CT scan and subjected to a transperitoneal approach.

Technique: We present a 3 minute video showing the unusual findings at laparoscopy. The transperitoneal approach allowed identification of a dilated distal ureter and its excision with the ipsilateral kidney. The salient steps in nephroureterectomy and ureterocele management are demonstrated.

Conclusion: This case underscores the deficiencies of both CT and DMSA scanning in a suspected pelvic MCDK. Moreover, the advantages of a transperitoneal approach in this unusual context are highlighted.
All is not lost: Gubernaculum-Sparing Two Stage Laparoscopic Fowler-Stephens Orchidopexy for an Intra-Abdominal Testis with Absent Vas

Stephens L, Goyal A
Department of Paediatric Urology, Royal Manchester Children’s Hospital, Oxford Road, Manchester, M13 9WL

Introduction: The two-stage Fowler-Stephens orchidopexy (FSO) relies on the development of collateral vessels to the testis following ligation of the main testicular vessels. These collaterals develop mainly from the vasal vessels, however, evidence suggests that the gubernaculum plays a role [1]. We report a case where a gubernaculum-sparing technique was successfully utilized to perform a FSO in an intra-abdominal testis with absent vas.

Method: A 14-month-old boy presented with a unilateral impalpable testis and contralateral normal testicle. At laparoscopy, absence of the vas was noted on the side of the intra-abdominal testis. However, the gubernaculum had some vessels and hence the main testicular vessels were divided. The descended testis had a normal vas and vessels. At second stage, the testis was viable with good gubernacular collaterals. A gubernaculum sparing procedure was performed. At two months follow-up, a good-sized testis was present in the scrotum.

Conclusion: The most common surgical technique for management of intra-abdominal testes is the two-stage laparoscopic FSO. However, there is risk of testicular atrophy. Gubernaculum-sparing surgery has been shown to decrease the rate of testicular atrophy [2,3]. This technique has been described in the presence of a normal vas. However, in our case, the vas was absent, thus illustrating the ability of the gubernacular collateral blood supply to maintain testicular blood flow independently once the testicular vessels are divided. This technique could be vital for children with Congenital Absence of the Vas Deferens (CAVD) and bilateral intra-abdominal testes who require preservation of the testes for hormonal production.
G1: 1100-1110  Comparison of long-term outcome between open and laparoscopic Thal fundoplication in children  
Dr Rainer Kubiak, Mrs Elena Böhm-Sturm, Dr Daniel Svoboda, Prof Lucas Wessel  
Department of Paediatric Surgery; Mannheim Medical School (UMM), Germany

Aims: To compare the long-term outcomes between open (OPF) and laparoscopic (LAP) Thal fundoplication in children with a minimum follow-up of at least two years after surgery.

Methods: This retrospective study includes children who underwent a Thal fundoplication between 3/1997-7/2009. Patients were contacted in order to obtain written consent to participate in the study and to take part in a telephone interview. The median follow-up time was 77 months (range, 29-176 months).

Results: 101 patients (61M/40F) were included, of which 47 underwent an OPF and 54 a LAP. Intra-operative problems, early post-operative complications, time to full feeds and length of stay did not differ among both groups. The duration of surgery was less in the OPF (108 vs 144 min., p<0.001). Severe dysphagia requiring endoscopy +/- dilatation was observed in 10 patients and the distribution did not reach statistical significance (n2 in OPF vs. n8 in LAP; p=0.10). Overall 12 patients (11.9%) (6 in each group) required a redo-fundoplication after a median of 18.7 months (range, 6-36 months). The “relative” failure rate (i.e. “intention to treat”) was also similar (n3 in OPF vs. n4 in LAP). In the whole study group 79.2% (n€) of patients were classified as their surgical results being excellent, good or satisfactory and there was no statistical difference between both methods.

Conclusions: In the long-term open and laparoscopic Thal fundoplication have a similar outcome without significant differences. The laparoscopic approach can be considered as an alternative, but not as being superior compared with its open counterpart.
G2: 1110-1117  The Effect Of Gastrostomy On Retching In Neurologically Impaired And Neurologically Normal Children Following Laparoscopic Nissen Fundoplication: A Retrospective 7 Year Cohort

Mr Khaled Abdelaal, Mr Thomas T Tsang, Dr Catalin Lupu

Norwich & Norfolk University Hospitals

Aims: Review of one of the well known post- Laparoscopic Nissen Fundoplication complications (retching/gagging). To compare the response of neurologically normal and neurologically impaired groups of patients. To assess the use of gastrostomy as a factor that can reduce the incidence of retching in these patients.

Methods: Retrospective medical notes review of patients who had Laparoscopic Nissen Fundoplication since 2006 in our paediatric surgical department, operated on by a single surgeon.

Results: 22 patients had Laparoscopic Nissen Fundoplication between March 2006 and May 2012. 50% were neurologically abnormal (group I). Group II included patients whose neurological status was considered to be normal but included patients with other associated problems (Laryngomalacia, Failure to thrive, repaired Oesophageal Atresia/ Tracheo-Oesophageal fistula, etc.). 54% of Group I started to gain Weight at 6 weeks postoperatively while only 46% of group II were able to do so. 81% of Group I were retching at 6 weeks follow-up, but the number decreased to 9% at 24 months follow-up. In comparison the percentages for group II were 54% and 27% respectively. All group I patients had gastrostomy (as new or as revisions of previous gastrostomy) while 45% of group II had gastrostomy (mostly as a new added procedure).

Conclusions: Retching is more likely to occur after Laparoscopic Nissen Fundoplication for children who are neurologically impaired. Addition of gastrostomy did not lead to resolution of retching at 24 months Follow up in the neurologically normal group of children. The evidence was deficient in the neurologically impaired group.
Buried Bumper is a rare but serious complication of percutaneous endoscopic gastrostomy (PEG). It occurs due to overgrowth of gastric mucosa over the internal bumper of the gastrostomy tube. Various approaches have been described to remove the buried bumper, but no well defined method exists.

We described a novel endoscopic technique to remove buried bumper in a 10 year old neurologically impaired boy, who required jejunal feeds through PEG – J tube (PEG with jejunal tube). Tube was last changed eight months back. There was difficulty to rotate and move the tube lately. Buried bumper was considered so elective change of PEG-J tube and removal of buried bumper was planned.

Technique: Endoscopy showed completely buried bumper with small opening of tube visible. Attempts to grab bumper was unsuccessful. PEG tube was cut short from outside. Alligator forceps passed inside out through PEG tube opening and turned outside to grab cut end of PEG. PEG removed with some traction and with thread passed into stomach with minimal gastric wall injury. Thread pulled up in the mouth and new PEG tube pulled out through the same tract. Jejunal tube placed in position.

The technique described showed minimal trauma and complication. The procedure was completed without the need for open surgery.

Atif Saeed, Marcin Kazmierski, Adil Aslam

Addenbrooke’s Hospital, Cambridge University Hospitals NHS Foundation Trust
Gastric Trichobezoar: A Laparoscopic-Assisted Technique

Edward Tudor, Claire Clark

Royal Hospital for Sick Children, Edinburgh

Trichobezoar can form within the stomach as a result of trichophagia. Presentation varies, and may be acute (with symptoms of gastric outflow obstruction) or chronic (weight loss, epigastric pain, change in bowel habit, vomiting, halitosis). Due to the rarity of trichobezoars, and their variety of presenting features, they can prove a diagnostic challenge.

Herein we describe the case of a 12 year old girl who presented with alopecia, lethargy, abdominal pain and diarrhoea. Trichobezoar was diagnosed at upper gastrointestinal endoscopy. At laparoscopy, the stomach was brought to the anterior epigastric abdominal wall, opened, and sutured to the skin exposing the bezoar. An Alexis wound retractor was used to protect the wound, and the bezoar was removed piecemeal. The patient had an uneventful post-operative recovery, and returned to normal activity.

There are few prior reports regarding surgical treatment of trichobezoar. Laparoscopic removal is reported, however this is the first known attempt at removing the bezoar under direct visualisation outside of the peritoneal cavity. Previously reported laparoscopic techniques for removing gastric trichobezoar involved mobilising hair through the peritoneal cavity, increasing the risk of infection. Our technique, using the Alexis wound retractor, reduces operative time and is associated with a lower risk of hair contaminating the peritoneal cavity.
G5: 1131-1138   Pylorostenosis – Experience In Laparoscopic Pyloromyotomy

A Kujawska, B Kotkowicz, M Puliński, M Szostawicki, W Choiński

The Department of Paediatric Clinical Surgery at the University of Warmia and Mazury in Olsztyn

Background: Laparoscopic pyloromyotomy is used widely for treatment of hypertrophic pyloric stenosis. The aim of this study was to present our experience, complications and way of treatment.

Methods: Case records of all babies undergoing laparoscopic pyloromyotomy between February 2009 and March 2012 were retrospectively compared for time of hospitalization, time to achieve oral feeding and complications: mucosal perforation and incomplete pyloromyotomy. The authors present a film with technique of successful pyloromyotomy, 2 films with case of mucosal perforation and treatment.

Results: There were 22 laparoscopic pyloromyotomies. Oral feeding was achieved by 24 hours (median 8 hours). The median hospital stay was 7 days. There were 2 mucosal perforations and 1 incomplete pyloromyotomy.

Conclusions: The technique of minimally invasive treatment of pylorostenosis carried out by an experienced team is effective and can be successfully employed to treat infants.
Laparoscopic duodenojejunostomy for duodenal obstruction secondary to gross scoliosis

B Bekdash, RM Lindley, SS Marven
Sheffield Children's Hospital

The superior mesenteric artery (or Wilkie’s) syndrome is a known acquired duodenal obstruction caused by extrinsic compression, classically in patients with a recent weight loss. Whilst the classical SMA syndrome may respond to supplemental nutrition and weight gain that widens the angle between the SMA and aorta by fat deposition, obstruction due to spinal distortion frequently does not.

A 15½yr old male with cerebral palsy and gross scoliosis presented with bilious vomiting following a 12-18 month period of subacute weight loss. Evaluation included a contrast enhanced CT scan that demonstrated the degree of spinal distortion, the configuration of the abdominal arterial tree and position of the duodenum.

An infracolic window was opened to expose the proximal dilated duodenum and an isoperistaltic side-to-side anastomosis was formed from the proximal jejunum to the duodenum using a laproscopic stapling device (EndoGIA Covidein) avoiding the ampulla of Vater. The post-operative recovery was uneventful and the patient was able to resume oral feeding after a brief period of upper gastrointestinal paresis. He has not required assisted feeding to date and his vomiting resolved. Laparoscopic duodenojejunostomy can be performed safely offering a potentially permanent solution to mechanical duodenal obstruction of this type. This technique requires less mobilisation of the duodenum, with the attendant risk to the mesenteric vasculature, than alternative approaches.
G7: 1145-1152  Combined laparoscopic and endoscopic evaluation of small bowel diaphragm disease

B Bekdash, G Soccorso, SS Marven, MA Thomson
Sheffield Children's Hospital

An 8 year old female presented with a chronic microcytic anaemia and was evaluated by wireless capsule endoscopy. Multiple mucosal diaphragms were demonstrated in the small bowel and a combined laparoscopic/endoscopic procedure was planned to further delineate the pathology and biopsy the lesions. Diaphragm disease is well described in adults on long-term NSAIDs and is believed to be an acquired pathology secondary to NSAID induced mucosal injury. In this case NSAID exposure was present but not pronounced and the aetiology remains uncertain. This video demonstrates the utility of a combination of endoscopy (in this case antegrade double balloon endoscopy) and laparoscopy in delineating and localising the pathology prior to laparoscopic assisted small bowel excisional biopsy that confirmed the diagnosis of small bowel diaphragm disease. Combination of laparoscopy with other modalities in this fashion widens the indications for minimally invasive surgery and enhances its utility.
Minimally invasive approaches to pediatric inflammatory bowel disease

B Bekdash, R Slater, GV Murthi
Sheffield Children's Hospital, Rotherham District General Hospital

Minimally invasive approaches to the management of inflammatory bowel disease (IBD) are well-established in adult practice. Paediatric surgeons who manage patients with these conditions can develop their laparoscopic skills and offer a minimally invasive approach to patients with these debilitating conditions.

We present a video montage of laparoscopic colectomy for IBD and subsequent (staged) laparoscopic assisted ileo-anal pouch formation for ulcerative colitis demonstrating our approach to the dissection, specimen delivery and reconstruction.
G9: 1159-1206  The Clinical Utility Of Laparoscopy In The Management Of Impalpable Testes In Pediatric Age Group

Mr M Alabdullah
QMC Hospital, Nottingham, UK

Aim: To evaluate the utility of laparoscopy in the management of impalpable testes.

Patients and methods: A prospective study of 49 impalpable testes underwent diagnostic laparoscopy at the Pediatric Surgery Centre/Mosul/ Iraq, between 2008 - 2011. These patients were proved to have impalpable testes whether unilateral or bilateral by clinical examination. Eight patients were sent for ultrasound examination by the referral doctor so we record these results and compared them with their laparoscopic findings.

Results: Five (10.2%) were palpated after anesthesia so traditional orchiopexy was performed and discharged home on the same day. Eleven (22.44%) testes were vanished, and the remaining 33(67.3%) testes were identified intraabdominally at different sites, Ten (20.4%) near the IIR were directly fixed, Eleven (22.44%) were fixed after extensive release of the cord, Seven (14.2%) fixed after cutting the vessels, and Five (10.2%) were after staged surgery (Fowler- Stephens Technique). All of these were discharged home a day after surgery. We found that the accuracy of preoperative ultrasound examination was only 50%. There were no immediate complications. Follow up (6 months-2 years) revealed that the testes were located in a normal scrotal position, but four (8.16%) of these were smaller than the contra lateral ones.

Conclusion: The laparoscopic management of impalpable testes showed excellent results with low morbidity. Furthermore, it is quick and easy in dealing with all varieties of impalpable testes. Routine preoperative ultrasound is neither necessary nor helpful because it is not accurately localize true non palpable testes and hence, does not alter the management.
Should Paediatric Laparoscopic Cholecystectomy only be Performed in high volume centres?

BSR Allin, MJ Haddad, SA Clarke
Chelsea & Westminster Hospital, London

Introduction/Aims: The Institute for Innovation and Improvement recommend that in order to reduce morbidity and mortality, laparoscopic cholecystectomies in adults should only be performed by surgeons who carry out a minimum of 40 per year. These guidelines do not currently extend to paediatric laparoscopic cholecystectomies. We aimed to assess whether as a department who have performed only 20 laparoscopic cholecystectomies over the past 6 years we were able to achieve a similar standard of outcome as our adult colleagues.

Methods: A retrospective case-note analysis was carried out of all paediatric laparoscopic cholecystectomies performed between May 2006 and January 2012 by two paediatric surgeons. Primary outcome measure was the presence of a major operative complication. Secondarily, we also looked at rates of conversion to open operation, and minor complications. Fishers exact test was used to compare these results with data collected in the adult department between September 2009 and August 2011.

Results: 20 paediatric, and 275 adult Laparoscopic Cholecystectomies were carried out over the stated period. There were no recorded major complications in the paediatric group, compared with 8 (2.9%), including 1 death, in the adult group. This was not a statistically significant difference. One paediatric patient (5%) required conversion to open, compared with 6(2.1%) in the adult group. There were 5 (25%) minor complications in the paediatric group, compared with 16 (5.8%) in the adult group, relative risk 4.29[1.75-10.52]p0.0014.

Conclusions: There was no statistically significant difference in major complication rate or conversion to open between the two groups, and although there were more minor complications in the paediatric group, none of these were intra-operative. The data suggests that in our unit despite the lower case load we are meeting the standards expected of our adult colleagues. We believe that for surgical standards to be maintained only one or two suitably trained surgeons should carry out such low volume procedures in a single paediatric tertiary centre.
G11: 1213-1220 Laparoscopic Assisted Anorectal Pull-Through For High Imperforate Anus: Eleven Years Experience
Ruggeri Giovanni, Gargano Tommaso, Maffi Michela, Destro Francesca, Cantone Noemi, Lima Mario
Policlinico S Orsola Malpighi Department of Pediatric Surgery, University of Bologna
Aim: to describe our eleven years experience with the Laparoscopic Assisted Anorectal Pull-through for High Imperforat Anus (LAARP).
Methods: In the Dept of Pediatric Surgery of the University of Bologna, from September 2001 to September 2012 ten patients, with a diagnosis of high anorectal malformations underwent LAARP. The patients, all males and aged from 3 to 9 months (mean age 4.8 months), presented a recto-urethral fistula. The following associated malformations were described: sacral malformation, laryngeal stenosis, urethral duplication, multicystic kidney, non palpable testis and type III esophageal atresia. All were treated with a colostomy in the newborn period followed by a delayed LAARP. The laparoscopic step was characterized by the stimulation of the puborectal muscle, using a modified Peña electrostimulator introduced via a trocar. All patients underwent a post operative period of anal dilatations.
Results: In nine cases the LAARP was succesful while in one case, due to a strong tension from the colostomy, a conversion to open technique was needed.
Conclusion: Although an evaluation regarding the continence is to be followed up, LAARP should be considered for the correction of the high imperforate anus; and according to our experience it represents actually the gold standard. It permits a good visualization of the fistula and of the surrounding structures and minimally invasive abdominal and perineal wounds. With the laparoscopic Peña stimulator the direct observation of the puborectal slings contraction allows an evaluation of the functional contractility and an accurate colonic pull through in the centre of the muscle complex.
Primary Laparoscopic-Assisted Endorectal Colon Pull-Through For Hirschsprung’s Disease: A 12 Years Experience

Ruggeri Giovanni, Gargano Tommaso, Maffi Michela, Destro Francesca, Mogiatti Mirella, Cantone Noemi, Lima Mario

Paediatric Surgery Department – University of Bologna. Policlinico S. Orsola – Ospedale Maggiore

Aim: to describe the surgical technique and early clinical results after a one-stage laparoscopic-assisted endorectal colon pull-through for Hirschsprung’s disease (HD).

Materials and methods: A retrospective analysis was performed on all patients undergoing laparoscopic-assisted endorectal colon pull-through for HD, in our department, from September 2000 to September 2012. The technique uses three or four abdominal ports (3-5 mm). The transition zone is initially identified by seromuscular biopsies, obtained with a laparoscopically-assisted technique. A colon pedicle is fashioned endoscopically. In the last years we dissect the mesocolon exteriorizing the colon through the umbilical wound. The rectal mobilization is performed transanally using an endorectal sleeve technique. The anastomosis is performed transanally, 1 cm above the dentate line.

Results: In the Institute of Pediatric Surgery of the University of Bologna, 49 patients underwent laparoscopic-assisted endorectal colon pull-through sec. Georgeson for HD. The age at surgery ranged from 1 month to 10 years-old (mean: 33 months). The average length of the surgical procedure was 3 hours. Almost all of the patients passed stool and flatus within 24-48 hours of surgery. The average time for discharge after surgery was 5 days. Intraoperatively no complications occurred. The post-operative course was uneventful. All 49 patients are currently alive and well. With the limits related to the heterogeneous follow-up length, we registered an evacuation frequency of once a day and the need for laxatives or enemas is occasionally.

Conclusions: According to our experience, laparoscopic-assisted endorectal colon pull-through represents actually the gold standard in the treatment of for HD.
Session 3 – Miscellaneous
M1: 1420-1430  High Definition Laparoscopy Reduces The Incidence Of Hydrocele After Laparoscopic Varicocelectomy
Balazs Bota, Balazs Kutasy, Ganapathy Laxamanadass, Manuela Hunziker, Prem Puri
The National Children’s Hospital, Dublin, Ireland

Aim: Laparoscopic Palomo procedure for varicocelectomy in children and adolescent has gained popularity during the past decade. The most common complication after Palomo procedure is postoperative hydrocele, with reported incidence of 15%-34%. Recent development of laparoscopic equipment with high-definition (HD) resolution allows better visualization and dissection. The aim of the study was to determine the incidence of hydrocele after varicocelectomy using HD laparoscope and compare it with standard definition (SD) laparoscope.

Methods: Between January 2003 and June 2012, 68 consecutive children with a median age of 13.9 years (10.5 years-16 years) underwent laparoscopic Palomo en masse ligation by the same surgeons. Varicocele was seen on the left in 65 and bilateral in 3 children. Thirty-three patients were treated laparoscopically with standard definition system (GroupSD) and 35 with high-definition digital laparoscope (GroupHD). After surgery all patients were assessed for persistence or recurrence of the varicocele, presence of hydrocele or other complications such as testicular atrophy.

Results: During the follow-up (mean:7.6 years, range:6 months-9 years), a total of 8 (11.8%) patients developed hydrocele after laparoscopic varicocelectomy, 2 in HD group and 6 in the SD group. The incidence of hydrocele was significantly lower in GroupHD compared to GroupSD (5.7% vs 18.2%,p<0.05). Persistence of varicocele was observed in 1 patient in GroupHD. None of the patients in either group developed testicular atrophy.

Conclusion: Our results show reduced incidence of postoperative hydrocele after HD laparoscopy. High-definition laparoscopy provides greatly improved image visualization, allowing precise dissection and preserving lymphatic vessels during varicocelectomy.
M2: 1430-1440  The Evolution Of A ‘Take Home’ Laparoscopic Simulator And Curriculum Of Simulated Skills

RW Partridge, I Hennessey, P Brennan, M Hughes, A Sabharwal
Department of Paediatric Surgery, Royal Hospital for Sick Children, Edinburgh, UK

Aims: We report a trainee-led initiative to produce a ‘take-home’ laparoscopic simulator and a curriculum of simulated laparoscopic skills.

Methods: The lead-author was awarded the best innovation award at the 2009 BAPES meeting, and has proceeded to develop the ‘take-home’ laparoscopic simulator concept. The product has been through a number of design and manufacture iterations, and the process of bringing a trainee-led, affordable and accessible training tool to market has been a challenging one. Four surgical trainees have teamed-up and formed a profit-for-purpose spin-out company, with the aim of providing accessible surgical simulation tools for surgeons throughout the world.

We recognise that producing affordable and portable take-home simulator hardware is only half the challenge. To develop and master laparoscopic skills, practice must be both directed and assessed. To address this we have established a Curriculum of Simulated Skills. This comprises training videos to direct practice, downloadable PBA-style assessment forms for trainers to objectively score performance, and a ‘professional media’ forum, allowing videoed performances to be uploaded and viewed remotely by trainers.

Results: The product and demonstration training videos are now available on our website: www.eoSurgical.com. The curriculum is undergoing the process of validation against existing validated simulated skills tasks, and the downloadable assessment forms will be available thereafter.

Conclusions: The authors have first-hand experience that regular use of a simple take-home laparoscopic simulator improves surgical skills considerably. We can now share these accessible and affordable training tools with fellow trainees.
Surgical Technique: Retroperitoneoscopic Approach For Adrenal Masses In Children

Yankovic F, Brain C, Sebire N, Sakoda A, Marks S, Mushtaq I

Great Ormond Street Hospital NHS trust

Aim: To describe the surgical technique of the retroperitoneoscopic prone approach for adrenal masses in children.

Methods: Retrospective case review of all patients who have undergone retroperitoneoscopic adrenalectomy at Great Ormond Street Hospital over the last 8 years. The procedure is demonstrated in a five minute and comprises a posterior prone approach using a homemade balloon to create the working space and three 5mm laparoscopic ports.

Results: At our institution, thirteen adrenalectomies in eleven patients with adrenal masses were done with this approach. This series include six boys and five girls with a mean age at treatment of 6 years (2 months to 15 years). Five patients were diagnosed with adrenocortical tumour (ACT), including two malignant lesions and three adenomas. One infant presented with a congenital Cushing disease and other with pigmented nodular adrenocortical disease, requiring bilateral adrenalectomies. Four patients had non-malignant phaeochromocytoma, including one girl with bilateral disease.

Complete excision of the lesions was achieved in all patients. Children treated for ACT are under oncologic follow up without recurrence. One of the patients treated for a right phaeochromocytoma has developed a metachronous lesion in the left adrenal and is waiting for surgery.

Conclusions: The retroperitoneoscopic prone approach for malignant and benign lesions of the adrenal glands is feasible and safe. Our series include the largest number of ACT treated with this approach, with comparable outcomes from open surgery.
A female presented at 18 months of age with persistent non-bilious emesis. US examination revealed a dilated proximal duodenum but was non-diagnostic. Contrast fluoroscopy was consistent with the diagnosis of pre-ampullary type I duodenal atresia with a fenestrated membrane. This was confirmed at endoscopy and the membrane was controlled with a balloon passed distally to allow lateral incision with an endoknife then dilated using a dual channel operating flexible endoscope (Olympus GIF-2TQ260m) allowing passage of the endoscope to the distal bowel. A single further endoscopic balloon dilatation was required one month later for recurrent vomiting.

Endoscopic treatment of fenestrated duodenal membranes is well described in adults but has only occasionally been utilised in the management of congenital duodenal webs in early childhood. This is the first reported case in the UK and although concerns regarding potential injury to the ampulla of Vater or an aberrant duct within the membrane are not unfounded this is a potential alternative to surgical bypass in appropriately sized children with favourable morphology, skills and equipment permitting. This approach should be considered for all children found to have fenestrated duodenal membranes.
M5: 1454-1501 Laparoscopic Management Of Intra Abdominal Testis: How Often Do We Divide The Vessels?

Mr Pankaj Kumar Mishra, Miss Charlotte Holbrook, Mr Thomas Tsang

Norfolk Norwich University Hospital NHS Trust

Aim: The laparoscopic orchiopexy for intra-abdominal (IAT) testis usually involves division of the testicular vessels and two-stage Fowler-Stephens procedure. We describe our experience of managing IAT where single-stage laparoscopic orchidopexy was safely performed in most of the cases with preservation of testicular vessels.

Method: Case notes of 28 patients with a diagnosis of IAT under single consultant during 1996 and 2011 were reviewed for clinical data, type of procedure, complications, and outcome.

Results: In 2 patients IAT was bilateral, so a total of 30 testes were operated on. The median age of the patients was 2.0 years. Twenty-three testes were within 2 cm from the internal inguinal ring had a single-stage procedure performed (20 testes had testicular vessels preserved whereas 3 testes needed single stage Fowler-Stephens procedure following testicular mobilization). Six IATs were considered unsuitable for single-stage procedure following laparoscopic assessment and underwent a two-stage Fowler-Stephens orchidopexy. One orchidectomy was performed for a hepato-testicular fusion abnormality.

At follow-up, atrophy rate in the single stage group was 2 in 23 (8.7%). One patient in the two-stage group was lost to follow-up, of the remaining 5; there was 1 case of testicular atrophy.

Conclusions: Properly selected of IAT can be managed safely with a single-stage laparoscopic procedure without division of the testicular vessels. In addition to avoiding the multiple procedures, preservation of the vascular supply may improve the long-term spermatic and hormonal function of the testis.
M6: 1501-1511  Gastrostomy Buttons: Does Size (or Shape) Matter?

James Andrews, Gregor Walker

Royal Hospital for Sick Children, Glasgow

Aim: To determine the difference in physical properties between two common brands of gastrostomy button.

Methods: Mic-key® (Kimberley Clark) and Mini® (AMT) gastrostomy buttons were tested in a bench model abdominal wall using the manufacturers recommended minimum (Vmin) and maximum (Vmax) balloon volumes. Buttons were inserted into the model and inflated to Vmin and Vmax. The following variables were investigated:

1) Balloon cross-sectional area
2) Contact surface area with the abdominal wall
3) Leak pressure from a fixed volume container attached to the abdominal wall
4) Traction force required to burst and/or remove the balloon

Results:

1) Mean cross sectional area was significantly smaller for the Mini® button at Vmin (147.70mm2 vs 201.66mm2) and at Vmax (192.09mm2 vs 278.10mm2)
2) Internal contact surface area was greater with the Mini® button at both Vmin and Vmax (119.27mm2 vs 96.00mm2 and 141.45mm2 vs 96.00mm2 respectively)
3) The leak pressure was similar for both buttons at Vmin (47.40mmHg vs 48.60mmHg) and Vmax (48.70mmHg vs 45.90mmHg)
4) The removal force was similar for both buttons at Vmin (Mini® 28.50N vs MicKey® 29.85N) but much greater for the Mini® at Vmax (58.25N vs 35.15N)

Conclusions: At manufacturers recommended Vmin and Vmax, the Mini® button will occupy less space in the stomach while having similar leak pressures to the MicKey®. At minimum volumes both buttons required similar force for removal, but at maximum volume, the Mini® proved more resilient, this may be related to the Mini’s® larger abdominal wall contact area.
M7: 1511-1518  VORTEX: Videoscopic Orthopaedic Resection of Thoracic EXostoses
Teague WJ, Porter DE, Fouad D, Munro FD
Royal Hospital for Sick Children, Edinburgh

Aims: Hereditary Multiple Exostoses (HME) is a rare autosomal dominant neoplastic trait, which typically presents in the first decade with multiple exostoses (osteochondromas). Lesions may be sessile or pedunculated and arise at various sites including the ribs, i.e. thoracic exostoses. This report aims to share early experience with a minimally invasive approach: VORTEX, Videoscopic Orthopaedic Resection of Thoracic EXostoses.

Methods: Key elements of VORTEX:
1) preoperative: joint assessment by an orthopaedic surgeon with a specialist interest in HME and paediatric surgeon, including cross-sectional imaging;
2) anaesthetic: left/right endobronchial intubation with ipsilateral lung collapse;
3) videoscopy: two 5mm port thoracoscopy to confirm lesion morphology and location, and divide overlying pleura and vessels using monopolar diathermy;
4) orthopaedic resection: videoscopic-assisted resection using Lexor mini-osteotomes and/or 2-5mm Mercian Kerrison Rongeurs introduced via intercostal incision(s) precisely placed as determined by thoracoscopy;
5) haemostasis: monopolar diathermy to lesion base/stalk;
6) lesion extraction: 5mm port exchanged for a 15mm port for bone fragments removed using an endoscopic specimen retrieval bag;
7) intercostal chest drain: inserted via a 5mm port incision, and retained for <24 hours.

Results: Two adolescent males with symptomatic thoracic exostoses underwent VORTEX. There were no intraoperative or early postoperative complications. Both had chest drains removed the day following surgery, and were well for discharge on the 2nd/3rd postoperative day. Both are symptom free after 12 and 6 months follow-up respectively.

Conclusions: We commend VORTEX as a low-morbidity treatment for symptomatic thoracic exostoses, which can be performed with conventional thorascopic and orthopaedic instruments.
Laparoscopic Pyloromyotomy: A Restored Surgical Training Opportunity

**Teague WJ, Lam JPH, Clarke MC, McHoney MC, McCabe AM, Wilson-Storey D, MacKinlay GA, Munro FD**

*Royal Hospital for Sick Children, Edinburgh*

**Aims:** Critics of laparoscopic pyloromyotomy (LP) contend that outcomes comparable with open pyloromyotomy (OP) have been achieved by consultant-led operating at the expense of registrar training. This study aimed to assess the impact of LP on operative training, and compare the outcome LP and OP.

**Methods:** A single-centre retrospective review was performed of all primary LPs and OPs between Jan 1999 and Aug 2012. Data collected included surgical approach, surgeon grade, postoperative stay, and complications. Groups were compared using Fisher’s tests; P<0.05 significant.

**Results:** During the study period, 282 primary LPs and 133 primary OPs were performed. Use of LP vs. OP trended up over the 14 years, e.g. 21% pyloromyotomies were laparoscopic in 1999 vs. 100% in 2012. Percentage of LPs performed by registrars also trended up, ranging from 0% in 1999 to 94% in 2012. Overall, registrars performed 168/281 (60%) LPs. There was no significant difference in the incidence of mucosal perforation (LP 3/282 vs. OP 5/133; P0.12). 1/282 LP patients incurred duodenal perforation unrelated to myotomy splitting. Significantly more infants required reoperation following LP (LP 13/282 vs. OP 1/133; P0.04) to address inadequate myotomy (7/282), herniated omentum (5/282), and port site hernia (1/282). However, analysis of the most recent 100 LPs and OPs showed no significant difference in reoperation rates (LP 5/100 vs. OP 1/100; P0.2)

**Conclusions:** Despite an initial consultant-led departmental “learning curve”, the majority of LPs are now performed by registrars, with the added training benefit of neonatal laparoscopy experience. Increased registrar operating has not compromised LP outcomes.
Laparoscopic Excision Of Choledochal Cyst With Hepaticojejunostomy

Cingel V, Duchaj B, Babala J, Zábojníková L, Fuňáková M, Petrík M, Trnka J

University Children’s Hospital Bratislava, Slovakia

Aims: Choledochal cyst is a common congenital biliary tract anomaly. The standard treatment of Type I choledochal cyst is complete cyst excision followed by Roux-en-Y hepaticojejunostomy. Laparoscopy is up-to-date procedure in treatment of biliary abnormalities.

Methods: In our case reports we present two patients:

Patient 1.: is 27-days full-term newborn with cardial anamnesis, combined hyperbilirubinaemia, hyperviscosis syndrome and persisting polycythemia. Abdominal ultrasound confirmed the gallbladder, and in the course of the ductus choledochus cystic dilatation was detected. The surgeon was consulted and a minimally invasive surgery procedure was indicated. Intraoperative cholangiography was performed. Perioperative finding of the malrotation-mesenterium commune required Ladd’s procedure.

Patient 2.: presented is 1-year and 6-months old child with congenital malformation of the extrahepatic biliary cyst of the choledochal duct Type I (Todani classification). Abnormality was verified using ultrasonography and with MRI. Endoscopic surgery was successfully done.

In both children we used: Olympus laparoscopic tower, Olympus flexible straight Ø 10 mm optic, Harmonic Ace Ø 5 mm, Aesculap AdTec mini instruments Ø 3.5 mm, endoloop, stapling device and a four-ports technique. Minimally invasive procedure involved cholecystectomy, complete cyst excision, a 40 cm Roux-en-Y jejunal loop fashioned extracorporeally, end-to-side hepaticojejunostomy performed intracorporeally under laparoscopic magnification.

Results & Conclusions: Duration of the surgery in first case was 4 hours 50 minutes and in second one 4 hours 30 minutes. There were no intraoperative or postoperative complications. High values of bilirubin were optimized and patients condition improved rapidly after operation in both cases. Laparoscopic treatment is a method of choice for children patients with congenital cystic malformations of the bile duct. Miniinvasive cyst excision with Roux-en-Y hepaticojejunostomy is safe procedure for newborn as for older children.
M10: 1538-1545 The ‘Double Hitch’ Manoeuvre In Laparoscopic Pyeloplasty - Early Experience

Abraham Cherian

Great Ormond Street Hospital for Children NHS Foundation Trust

Aim: To present the “double hitch” manoeuvre, and compare operating times with conventional “single hitch” laparoscopic pyeloplasty.

Methods: Over a period of one year (2011-2012), 11 laparoscopic pyeloplasties were performed for pelvi-ureteric junction obstruction by a single surgeon. Five patients (Group 1) underwent the conventional technique using the single hitch and six (Group 2) had the "double hitch" manoeuvre. The double hitch manoeuvre is as follows: A point high on the pelvis is chosen for the first hitch stitch. Pelvic division is completed leaving the lower pelvis, PUJ and ureter in continuity. This lower segment is positioned anterior to lower pole vessels (if present) and its cranial end is transfixed (second hitch) using the same hitch suture. The double hitch now elevates both divided segments anterior to the lower pole vessels aligned one beside the other. Spatulation of the ureter is done before or after elevation. Suturing is begun at the heel using continuous 5/0 PDS. A 4.7 Fr JJ stent is left insitu and removed in 4 to 6 weeks time. The bladder is drained for the first 48 hours and then removed and patient discharged home. Follow up ultrasound scans were available for all confirming improvement in dilatation. Mean follow up period for Group 1 was 8.4 months and for Group 2 was 3 months.

Results: Group 1 - Total of 5 patients, M:F 3:2, mean age 112.8 months, and mean operating time 172 minutes (range 150-192 minutes).

Group 2 - Total of 6 patients, M:F 4:2, mean age 117.5 months, and mean operating time 131 minutes (range 114-149 minutes).

Conclusion: The double hitch manoeuvre provides stabilisation and alignment of the anastamotic segments thereby facilitating intracorporeal suturing making it less time consuming and probably less laborious in laparoscopic pyeloplasty.
Session 4 – Thoracoscopic/SILS/NOTES
T1: 1630-1640  Implantation Of A Nuss Bar Under Thoracoscopic Guidance In Children Patients With Pectus Excavatum


University Children’s Hospital Bratislava, Slovakia

Aims: The original minimvasive method of pectus bar placement have been modified to improve safety and efficacy and avoid life threatening complications especially cardiothoracic injury.

Methods: Seventy one children, 12 girls and 59 boys with pectus excavatum (PE) underwent between 2002 and 2011 miniminvasive repair of the anterior chest wall deformity. The mean age was 13.2 years. In 24 patients (mean age 15.4 years) we performed modified Nuss procedure using right sided thoracoscopy and left to right tunnel creation for retrosternal Nuss bar. Four children underwent redo-operation (3 after failure of Nuss procedure, 1 after modified Ravitch correction) and 3 with funnel chest after previous cardiothoracic surgery. The trocar and the 10 mm flexible optic was inserted only through the right thoracic incision in its lower end close to the diaphragm in all patients. The CO2 insufflation pressure should be kept as low as possible and usually a pressure of 5 mm Hg is sufficient to keep the lungs out of the operative field. We used only right-sided thoracoscopy in our series. The introducer tip should always be kept in view through the thoracoscope during the mediastinal tunneling. The steel bar was inserted with convexity facing posteriorly, and when it is in position, the bar is turned over, thereby correcting the deformity. For the larger patients with larger defects, two bars were used. Endoscopic visualisation during Nuss correction of the PE allows safer support bar insertion too. Occasionally a small steel, groved plate we used to stabilize the bar(s)on the left side of the thorax.

Results & Conclusions: The operation was successfully accomplished without severe complications in all cases. The most frequent postoperative complications were: pleural effusion (15), haemothorax (4) and pneumothorax (3). Drainage of the thoracic cavity required 9 patients. Displacement of the pectus bar was observed in 2 cases.
The Nuss operation can be performed with or without use of thoracoscopy. Unilateral-right sided thoracoscopic miniinvasive repair of PE with left to right pectus bar tunnel creation is safe alternative to the traditional "blind" approach, and it allows enough visualisation of the mediastinum and eliminates the need for additional safety measures such as subxiphoid dissection and elevation. By using the right chest thoracoscopy during mediastinal tunnel dissection can be eliminated the risk of life threatening complications like cardiac or major vessels injury. In our opinion the implantation of a Nuss bar under thoracoscopic guidance is fundamental in children patients with PE recurrence or in cases after previous cardiothoracic operation via sternotomy.
Thoracoscopic Surgery For Spontaneous Pneumothorax In Children

Ravindar Anbarasan, Dakshesh Parikh, Michael Singh

Birmingham Children's Hospital

Aims and Objectives: Over the last 15 years thoracoscopic bullectomy and pleurodesis has become the preferred surgical treatment for adults with primary spontaneous pneumothorax (PSP). We present our experience with thoracoscopic surgery (TS) in children (<16 years old) with PSP.

Materials and Methods: We carried out a retrospective, single, centre review of all patients with PSP undergoing TS between 2004 and 2012.

Results: The case records of 20 children (5 females, 15 males) were available for evaluation. The median age at initial presentation was 13.5 years (range 5-16 years). The procedures performed included: bullectomy with Ligasure® or Stapler (9, 2004-2007), stapled bullectomy and pleurectomy (10, 2008-20012) and blood pleurodesis (1). Between 2004 and 2012 five patients had recurrence of pneumothorax at a median of 5 months (range 4 days to 1 year) managed with blood pleurodesis, thoracoscopic pleurectomy or an open procedure. One patient was managed conservatively. Of patients who underwent stapled bullectomy and pleurectomy, one represented with a small ipsilateral, loculated, apical pneumothorax which was managed conservatively. Two had contralateral pneumothorax and underwent surgery.

Conclusion: Our experience suggests that Thoracoscopic bullectomy and pleurectomy can effectively manage PSP in children. Recurrence requiring surgical intervention following TS has decreased with thoracoscopic stapled bullectomy plus partial parietal pleurectomy.
Female child was diagnosed to have large posterior mediastinal mass antenatally. Postnatal MRI identified a 6.8cm by 3 cm large multilobulated tubular structure extending from 5th Thoracic vertebra on Right side of chest up-to celiac axis between liver and stomach traversing the hiatus. Diagnosis of Large thoraco-abdominal oesophageal duplication cyst was made. Child underwent combined laparo- thorascoscopic excision at 13 months of age. Laparoscopic excision of the abdominal and left sided component was achieved. Patient was turned on lateral aspect and ight thoracoscopy was performed. The right sided component of the cyst was released and cyst removed.

Operation time was 7 hr 20 minutes. Patient withstood the procedure well and was discharged home on 6th postoperative day. She continued to be asymptomatic 1 year after surgery.
T4: 1654-1701    Technicalities Of Thoracoscopic Excision Of A Pig’s Bronchus

Michael Singh, Melissa Short, Dakshesh Parikh
Birmingham Children's Hospital NHS Foundation Trust

Aims: Upper lobe bronchi originating from the trachea above the carina are thought to be the result of an abnormal tracheal out-pouching early in embryonic life. Also referred to as PIG bronchus (due to the fact that this configuration is usual in swine, cattle, sheep, goats, giraffes and camels), it has a reported incidence of 2-10% and is more common on the right. We detail the case of a 2yr old girl who presented with a history of recurrent chest infections, developmental delay and failure to thrive.

Methods: We present the CT imaging together with diagnostic bronchoscopy which demonstrates how the diagnosis was confirmed. A video of her thoracoscopic right upper lobectomy demonstrating the sequence of steps for excision is presented.

Results: The patient had no postoperative complications and was discharged on the 5th postoperative day.

Conclusions: A pig’s bronchus is a rare bronchial abnormality which can occasionally be symptomatic. Thoracoscopic excision is possible.
**T5: 1701-1711  Minimally Invasive Thoracic Surgery.**

**Institutional Experience**

Gargano Tommaso, Ruggeri Giovanni, Maffi Michela, Mazzerò Giosuè, Cantone Noemi, Carlini Veronica, **Lima Mario**

*Paediatric Surgery Department – University of Bologna. Policlinico S. Orsola – Ospedale Maggiore*

Aim: to review our institutional experience in minimally invasive thoracic procedures in infants and children in a ten years period.

Methods: Between January 2002 and April 2012, 181 minimally invasive thoracic procedures have been performed, 6 repair of esophageal atresia with distal fistula, 1 esophagectomy, 63 congenital pulmonary cystic lesions (43 CCAM, 19 BPS, 1 BC), 30 oncologic biopsies, 12 total resections of mediastinal masses, 3 correction of diaphragmatic defects, 5 Nuss procedures, and 57 video-assisted thoracoscopic surgery in the treatment of empyema.

Results: The our experience reports a big rate of successfull and we had no major complications. We had 31 conversions for technical difficulty.

Conclusions: Thoracoscopic approach is feasible and safe technique. Postoperative less pain, low hospital stay, and better cosmetic result, avoiding the significant short and long term morbidity associated with thoracotomy, are considered advantages of this minimally invasive procedure.
T6: 1711-1718  SILS concomitant cholecystectomy and splenectomy in Patient with Hereditary Spherocytosis

Zabojnikova L, Cingel V, Duchaj B, Babala J
University Children’s Hospital, Bratislava, Slovakia

Aims: Hereditary spherocytosis refers to a group of heterogeneous inherited anemia that is characterized by the presence of spherical-shaped erythrocytes (so-called spherocytes) on the peripheral blood smear. Cholelithiasis is caused by hyperbilirubinemia from erythrocyte hemolysis and affects 50% of unsplenectomized patients who have hereditary spherocytosis. If gallstones are present, it is appropriate to perform cholecystectomy at the time of splenectomy, although when the patient has symptoms of gall bladder disease. We present a case of SILS splenectomy and cholecystectomy performed with conventional laparoscopic instruments in a 11-year-old girl with the diagnosis of hereditary spherocytosis.

Methods: A 2-3 cm umbilical incision was used for the placement of two 5 mm trocars and one 10 mm flexible videoscope. Conventional laparoscopic dissector, grasper, Ligasure, Harmonic Ace and hemoclips were the main tools during surgical procedure. We prefer Single Incision Laparoscopic Surgery Foam Port (Covidien, Inc.) as the single umbilical device for introduction into the abdominal cavity. First an angled telescope is introduced to ensure we are in the abdominal cavity. Pneumoperitoneum is established to 12-14 mm Hg and an adequate workspace has been created. Two additional low-profile 5-mm ports are then placed. First we made cholecystectomy, than the gallbladder was put aside over the liver, than we made splenectomy. To remove the detached spleen and gallbladder, a nylon extraction bag is introduced through one of the port sites. The spleen is than morcellated in the bag with forceps and removed in fragments. After we remove them, the umbilical fascial incision is closed.

Results & Conclusions: Splenectomy is the only effective therapy for this disorder and often it is performed in combination with cholecystectomy. Conventional surgery requires a wide upper abdominal incision for correct exposure of the gallbladder and spleen. We report our experience with patient who underwent combined SILS splenectomy and cholecystectomy for hereditary spherocytosis. Our report shows that SILS splenectomy and
cholecystectomy is feasible even in young children and despite the small number of cases in the world, we consider the combined laparoscopic approach safe and effective for the treatment of hereditary spherocytosis. According to actually published guidelines, the laparoscopic approach to splenectomy is recommended, but it depends on the availability of appropriately trained surgeons and suitable equipment.
T7: 1718-1725  Is Single Port Surgery Feasible After Liver Transplant?

Augusto Zani, Anu Paul, Ashish P Desai

Department of Paediatric Surgery, King’s College Hospital, London, UK

Aim: Role of laparoscopy after major laparotomy is debated. In children who underwent liver transplant and who need further abdominal surgery, open laparotomy is considered the preferred approach due to previous adhesions. Laparoscopy has still a controversial role. Herein, we present the first cases of SPES (Single Port Endoscopic surgery) post-liver transplant and discuss the feasibility of this approach.

Patients: Between 2009 and 2012, 21 SPES procedures were performed by a single surgeon. Among these, 2 children who had undergone liver transplant had 3 SPES procedures. SPES access was obtained using Olympus TriPort.

Case 1: 11-year-old born with biliary atresia, who had already undergone Kasai portoenterostomy, liver transplant and 2 abdominal node biopsies for post-transplant lymphoproliferative disease. Due to suspected relapse, node biopsy using SPES was offered. Following adhesiolysis, the lymph node biopsy was achieved successfully (operative time: 92 minutes).

Case 2: 5-year-old with glycogen storage disorder who had undergone liver transplant (aged 2 years) underwent 2 SPES procedures for bilateral intra-abdominal testis. At 5 years of life, a left one-stage orchedopexy and right first-stage Fowler-Stephen procedure were performed. After 9 months, the child had a 2nd stage Fowler-Stephen surgery on the right side. The operative time for two procedures was 97 minutes and 86 minutes, respectively.

Both patients could be discharged home on 1st postoperative day.

Conclusions: SPES is feasible and safe in patients who had liver transplant. In case of diffuse intraperitoneal adhesions, SPES is beneficial to create space by blunt and sharp dissection & decreases postoperative stay.
Posters

P1: Evolution Of An Inflammatory Bowel Disease Service: The Role Of Laparoscopy

Ms Anu Paul, Dr Babu Vadmalayan, Mr Ashish Desai, Mr Niyi Adeajayi

King's College Hospital, London

Aim: Inflammatory bowel disease (IBD) in children and adolescents is often aggressive. Surgical intervention is widely reported to have a high complication rate. A new multi-disciplinary service was reviewed with particular reference to the role of laparoscopy. We report the results.

Methods: 4 year (2009 - 2012) review of the records of 11 children with IBD referred for surgical intervention in a single institution. Those undergoing laparoscopic intervention are detailed.

Results: 11 (5 males) children were referred to surgical services with diagnosis of IBD. 10 patients had Crohn’s disease while 1 had ulcerative colitis. 4 patients were continued on medical management. 2 had perianal crohn’s and were treated with local procedures. 7 underwent various surgical interventions. Laparoscopy was used in 5 cases. Procedures like Right hemicolecotomy, ilial resection and ‘j’ pouch were used depending on underlying pathology and finding. Surgical techniques and long term complications and management will be discussed.

Conclusion: IBD is a complex condition requiring multidisciplinary approach. Laparoscopy forms an integral part of surgical management. A competent laparoscopist is required to treat and vary the surgical approach required.
P2: Ganglioneuromatosis of intestine - management dilemma and Single port Subtotal colectomy

Ms Anu Paul, Ms Abigail Katy Khoo, Dr Babu Vadomalayan, Mr Ashish Desai

King’s College Hospital, London, UK

Aims: Intestinal ganglioneuromatosis is an extremely rare condition with characteristic benign overgrowths of nerve fibres, ganglion cells and supporting cells. It has malignant potential. Here we report the case of a symptomatic child with diffuse intestinal ganglioneuromatosis, requiring Subtotal Colectomy. We discuss the diagnostic challenges and management considerations of this rare condition. Challenges and alterations in technique for Single port Technique for subtotal colectomy are described.

Methods: 7 year old, autistic girl presented with 5 year history of diarrhoea, abdominal pain and intermittent rectal bleeding. Investigations confirmed this to be a rare case of Ganglioneuromatosis. Disease was extending up to duodenum. A subtotal colectomy and end ileostomy was undertaken using Olympus Triport. An additional 5 mm port was used in RIF at stoma site.

Results: Subtotal colectomy was carried out with one additional port. Conversion to open surgery was not required. Total Surgical time was 8 Hrs. Patient made uneventful recovery and was discharged home on Day 20 after surgery. Delayed Discharge was related to autism.

Conclusions: Ganglioneuromatosis is a rare cause of GI Polyps. Colectomy is recommended to prevent malignant transformation. Single port technique can safely be used by experienced surgeon.
P3: Colonoscopic Assisted Trephine Stoma (CATS) In Children With Chronic Constipation

Mr BJ MacCormack, Mr WA McCallion

Royal Belfast Hospital for Sick Children

Aims: In extreme cases, faecal diversion is required for children with chronic constipation and mega-rectum. Formation of a proximal ‘trephine’ sigmoid colostomy would avoid the need for, and the associated morbidity of, a formal laparotomy. Here we describe a technique which combines intra-operative colonoscopy with a diverting ‘trephine’ sigmoid colostomy. This allows the surgeon to rapidly identify the correct bowel loop and avoids inadvertent maturation of the wrong end of the divided colon.

Methods: A retrospective case-note review identified seven children with chronic constipation and megarectum who had undergone a CATS procedure over a 6 year period. Using a colonoscope to identify a sigmoid colon loop that could easily be approximated to the anterior abdominal wall, faecal diversion was achieved by creating an end colostomy through a 3cm skin incision in the left iliac fossa.

Results: Of the 7 patients identified, 5 had idiopathic constipation and 2 had a history of high anorectal malformation. Aggressive medical management of constipation had failed in all cases and ACE washouts had failed in two. Median follow-up was 2.8 years (range 0.5 to 6 years). One colostomy prolapsed and was refashioned. In one patient the colostomy was reversed after 5.5 years with immediate return of normal bowel function.

Conclusions: Colonoscopic Assisted Trephine Stoma (CATS) in children with chronic constipation and megarectum is a safe, effective, minimally invasive method of achieving faecal diversion with minimal morbidity.
An Innovative Technique For Peg To Button Gastrostomy Change

Costa Healy, A Mahomed
Royal Alexandra Children's Hospital, Brighton, UK

It is a common practice when changing PEG tubes to gastrostomy buttons to use blind dilation of the tract with solid, unyielding dilators to increase the calibre of the tract. This has the potential to create a false passage with the button being placed within the peritoneal cavity. Moreover, loss of the tract may require replacement with a larger calibre PEG with conversion to a button device at a later time.

Aim: We describe a safer, more controlled technique for changing primary gastrostomies to a larger calibre gastrostomy button. We demonstrate how this technique has been utilised without any significant complications.

Method: A guide-wire is passed through the tract (of the removed PEG) along which is passed a series of oesophageal-type dilators to achieve the required calibre. The gastroscope allows direct vision of the dilatation process. The tract length is measured with a standard measuring device and the button gastrostomy placed under vision. Both devices are passed over the guide-wire, eliminating the risk of failure.

Results: This technique has been used successfully by the senior author for the last 10 years. Patients who had their initial gastrostomy tube (9Fr.) placed during a fundoplication were entered prospectively into a database. Twenty eight patients underwent change to button gastrostomy device (12Fr.) by the described technique. No complications occurred following the change of gastrostomy.

Conclusion: We believe this technique offers a controlled method for the dilatation of an unwieldy tract necessary to allow introduction of a balloon gastrostomy following initial PEG placement.
P5: Laparoscopic Management Of Auto-Amputated Ovarian Cysts In Infants: Current Status

CK Sinha¹, A Joshi¹, A Cherian²

¹-The Royal London Hospital, London , 2- GOS Hospital for Children, London

Aims: To find out current status of Auto-amputated Ovarian Cysts (AOC) in infants.

Methods: Literature was reviewed for the last 32 years (1980-2011) for AOC in infants. We report the outcome, along with our two case reports.

Results (Review of Literature): 14 publications were found, reporting 15 cases. 12 cases were presumed asymptomatic. 2 cases were >5 cm in diameter. One infant had bilateral AOC. Only 4 cases were operated laparoscopically and 11 cysts were removed by laparotomy. Spontaneous resolution was not seen in any case. Operative removal was performed in all cases. No malignancy was reported in the literature.

Our cases:

Case 1: An 11 month girl presented with antenatal diagnosis of right multicystic dysplastic kidney. Post-natal ultrasonography (US) revealed progressive enlargement. MAG3 showed no functioning renal tissue on right side. All blood results including tumour markers were normal. Due to further increase in size of the cyst, a laparoscopic removal was planned, which revealed a free-floating, large right-sided AOC (12x10cm). The cyst was removed laparoscopically.

Case 2: This 10 month infant was diagnosed to have a cyst on antenatal US. Post-natal US revealed a cyst (6x4cm) in pelvis with absent right ovary. The cyst was not resolving and appeared complex on US (thick walled with debris). Laparoscopy revealed the cyst to be free-floating and was removed via umbilical port.

Conclusion: Laparoscopic removal of AOC is feasible and safe. No malignancy in AOC has been reported so far, which is encouraging for aspiration of large cysts during laparoscopic removal.
P6: Voluminous "Cobra-Head" Stone In A Duplex System Ureterocele

Scuderi M, Featherstone N, Yankovic F, Smeulders N.

*Great Ormond Street Hospital NHS trust*

**Aim:** We describe combined cysto-ureteroscopy and per-cutaneous cystolithotomy (PCCL) for ureterocele incision and stone clearance.

**Methods:** The patient was positioned supine in lithotomy. By cystoscopy, the upper moiety ureterocele was incised along its inferolateral border by Holmium-YAG laser (Lumenis Versapulse). An unsheathed nephroscope (Storz) passed through a supra-pubic PCCL tract (Cook clear 30 Amplatz sheath) into the ureterocele allowed the “head” of the calculus to be cleared by ultrasonic lithotripsy, lithovac (EMS Swiss Lithoclast Master) and grasping forceps. In view of the 90 degree angulation from the stone’s “head” to “body”, a semi-rigid ureteroscope (4.5Fr Wolf) passed per urethra then enabled complete stone fragmentation by Holmium-YAG laser. After transfer of stone fragments from ureter to bladder by Dormia basket (Boston Scientific 1.9Fr Zero-tip) these were cleared by Lithovac per PCCL. A JJ stent was inserted under X-ray guidance. Suprapubic and urethral catheters were removed 3 and 5 days post-operatively.

**Results:** A 7 year-old boy presented with haematuria and left flank pain from infancy. Abdominal radiography and ultrasound showed a left ureterocele packed with voluminous 8.5cm ‘cobra-head’ calculus without proximal hydroureter. Mag-3 renography attributed 39% differential function to his duplex kidney with apparent good drainage. Coliform urinary tract infection was treated pre-operatively. Follow-up cystouretero-renoscopy 1 month later revealed no residual stones.

**Conclusions:** This combined approach permits ureterocoele incision along its infero-lateral border, access to both the stone’s “head” and “body” in a single procedure, as well as highly-efficient stone clearance.
P7: Renal Stones In Children Under The Age Of 2 Years
Georgina Malakounides, Alex Barnacle, William Van’t Hoff, Simon Choong, Naima Smeulders
Great Ormond Street Hospital, London

Aims: Review our experience of minimally invasive techniques for urolithiasis in children under the age of 2 years.

Methods: Prospective record of all children under the age of 2 years presenting with renal stones to our multi-disciplinary paediatric urolithiasis service from Sept’09-Sep’11.

Results: Of 67 children treated for stones at our institution in the last 2 years, 10 (6 boys, 4 girls) were aged 10-23 months (median 15 months) weighing 7.3-12kg (median 10.4kg). Two presented with haematuria. Eight presented with sepsis, all with obstructive calculi: one had septic shock requiring intensive care and haemodialysis (bilateral staghorn calculi), two had unilateral pyonephrosis (staghorn calculi) and five had pyelonephritis. Six required emergency nephrostomies or ureteric stenting.

Eight children (10 kidneys) were rendered stone free by a single percutaneous nephrolithotomy (PCNL) procedure (including flexible-nephroscopy, rendez-vous or second tracts) combined with uretero-renoscopies in two. Post-operatively, one required second-line antibiotics for sepsis, one intensive care for fluid intolerance (recovered but died 1 year later from comorbidities) and one required infected ureteric stent removal. One had extracorporeal shock wave lithotripsy (ESWL) for unresponsive recurrent stones after bilateral complex PCNL. One, presenting in acute-renal-failure, retained an inaccessible <5mm echogenic focus in a calyceal diverticulum of a solitary kidney. Functional imaging in seven showed renal scarring in five.

Conclusions: Urolithiasis in children under 2 years carries a high risk of obstruction and sepsis culminating in renal damage. Whilst open nephrolithotomy continues to be offered for stone removal, minimally-invasive techniques are safe and highly effective though require a multi-disciplinary approach. Prompt referral to specialist units is essential.
P8: Harmonic Scalpel In Laparoscopic Heminephrectomy: Safety And Efficacy

Nishat Rahman, Abraham Cherian

Great Ormond Street Hospital for Children NHS Foundation Trust

Aim: Review our experience and determine the effectiveness of the use of the harmonic scalpel in laparoscopic heminephrectomy.

Methods: A retrospective review of all patients who underwent laparoscopic heminephrectomy by a single surgeon over a 3.5-year period (September 2008 – February 2012) was performed. The harmonic scalpel was used to transect the renal parenchyma in all. No suturing of the residual raw surface was undertaken. Demographics, laterality, postoperative complications, outcome and radiological findings (Ultrasound & MAG3 renogram) were noted. Median follow-up was 13 months (range 4 – 42 months).

Results: 19 children underwent laparoscopic heminephrectomy: 18 transperitoneal, 1 retroperitoneal. Median age at surgery was 16 months (range 3 – 247 months). Six children were under 1 year of age. Eleven had right-sided procedures. Sixteen upper moieties and 3 lower moieties were removed. There were no intra-operative complications including bleeding and no conversions to open. One child who had the retroperitoneal approach developed a post-operative urinoma, drained percutaneously. One child developed stump infection secondary to an obstructed, ectopic ureterocoele which was treated by incision and drainage of the ureterocoele. One child had an avascular cyst at the margin of the remaining moiety, which had resolved on the 15-month follow-up ultrasound. No residual moieties were lost.

Conclusion: Post-operative radiological findings of a cyst related to the residual moiety are common following the use of other techniques for heminephrectomy. Using the harmonic scalpel to transect the renal parenchyma is safe. Residual raw areas do not need closure. With this method cystic lesions are extremely rare.
We present a case of a 3 year old girl with an iatrogenic diaphragmatic hernia that presented 11 months after laparoscopic splenectomy for hereditary spherocytosis. She presented with abdominal pain and vomiting. Although initially treated conservatively for appendicitis, pain continued and the patient started to have bile stained vomiting. A CT scan as well as a chest and abdominal X-ray showed the presence of diaphragmatic hernia. The patient underwent an emergency laparotomy where the transverse colon was reduced into the abdomen and the defect closed. The patient subsequently made a full recovery.

We discuss the increasing reports of iatrogenic diaphragmatic hernia and potential causes, as well as the importance of firstly, considering it after abdominal surgery, and secondly warning patients of this rare but dangerous complication.
P10: Laparoscopy For Non-Palpable Testes: Single Centre Experience

Maurizio Pacilli, Clara Yiu, Martyn Williams, Daniel Carroll, Nicola Smith, Claire Jackson, Adil Aslam

Cambridge University Hospital

Aims: To appraise the results of laparoscopy for non-palpable testes.

Methods: Following ethical approval, a review of children that underwent laparoscopy for non-palpable testes (2004-2011) was performed. Data are reported as median (range) and were compared by Fisher's exact test.

Results: 60 patients (77 non-palpable testes; 37 left, 40 right) were reviewed. Median age at laparoscopy was 18 months (9-188). Median post-op follow-up was 13 months (2-60). Twelve patients (20%) had associated anomalies. Following laparoscopy, 4 testes (5%) were atrophic (remnant) and were removed, 35 testes (45%) were treated with a single-stage orchidopexy and 38 testes (50%) required a two-stage orchidopexy (5 awaiting 2nd stage). There was no difference before surgery in the incidence of testicular hypotrophy between patients requiring a single-stage or a two-stage orchidopexy (p<0.2). Ten patients (3 single-stage and 9 two-stage testes) were lost at follow-up. Although there was a higher incidence of hypotrophy at follow-up in the group that underwent a two-stage procedure, the difference was not statistically significant (p<0.2).

Conclusions: In our experience, 5% of non-palpable testes are atrophic and 28% are hypotrophic at laparoscopy. Almost half (45%) can be treated with a single-stage procedure although one quarter (25%) will be hypotrophic at follow-up. The remaining 50% will require a two-stage procedure with a higher incidence of hypotrophy (41.7%) and an incidence of atrophy less than 5%.
BAPES Annual Dinner

The Lorne Hotel
923 Sauchiehall Street
Glasgow
G3 7TQ

Tuesday 20\textsuperscript{th} November 2012

\textit{7.30pm}
Directions

The Royal College Of Physicians & Surgeons Of Glasgow
232-242 Saint Vincent Street, Glasgow, G2 5RJ, United Kingdom

1. Head west on St. Vincent St toward Douglas St
   About 4 mins
go 0.2 mi
total 0.2 mi

2. Slight left to stay on St. Vincent St
   About 7 mins
go 0.4 mi
total 0.6 mi

3. Continue onto Argyle St
   About 5 mins
go 0.3 mi
total 0.8 mi

4. Turn right onto Kelvingrove St
   About 1 min
go 0.2 mi
total 0.9 mi

5. Turn left onto Sauchiehall St
   Destination will be on the left
go 0.1 mi
total 0.9 mi

Bukharah
923 Sauchiehall Street, Glasgow, Glasgow City G3 7, United Kingdom

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.
Map data ©2012 Google
Silver Level Sponsors

Surgical Innovations

ETHICON
a Johnson & Johnson company
Gold Level Sponsors