The 12th Annual Scientific Meeting of AUGIS

A very successful 12th Annual Scientific Meeting of AUGIS took place in September in Liverpool, this year's European City of Culture. This city provided a fitting backdrop to the AUGIS meeting as colleagues from around the world gathered to share scientific knowledge, renew friendships and form new networks.

The packed Scientific Programme had something for everyone and reflected the expanded role of AUGIS to include oesophago-gastric, bariatric, hepatobiliary and pancreatic surgery.

The first day was devoted to a teaching day for trainees and young consultants with live link surgery and this went extremely well.

The more formal teaching day on Thursday gave everyone a chance to update themselves on new knowledge and the latest thinking. Friday's parallel, more specialist sessions, proved incredibly useful for those looking to increase their knowledge of specialist areas.

Nurse affiliates are playing an increasing role in our multi-disciplinary teams and their well-attended session received very positive feedback.

Day 1 - Training Day: Upper GI/Hepatobiliary/Pancreatic Workshop

An annual North West Hepatobiliary Training Day has been jointly run between North Manchester General Hospital and University Hospital Aintree for the past three years.

However, with AUGIS returning to the North West of England for the Annual Scientific Meeting, surgeons at North Manchester and University Hospital Aintree felt it would be appropriate to run a training day in conjunction with AUGIS.

The day took place in the Convention Centre at the Clinical Sciences Building, University Hospital Aintree, with delegates including established consultants and trainees ranging from ST1 to Post CCT Fellows.

The aim was to combine live operating sessions from both centres with panel discussions and presentations, including operative videos.

As this was an AUGIS training day, we broadened the scope of the surgery from our usual hepato-pancreato-biliary syllabus to include a range of upper gastro-intestinal procedures. Live demonstrations took place from two operating theatres in Liverpool and two operating theatres in Manchester in addition to the Endoscopy Suite at Aintree.

The undoubted star of the show was Professor Palanivelu, who flew in from Coimbatore, India, specifically to demonstrate a thoraco laparoscopic oesophagectomy, which he performed in under six hours. The patient subsequently went home within five days.
Other Faculty Members (Messrs Sherlock, Vadeyar, Manu, Malik, Fenwick, Shrotri and

Javed) supported and performed other operations, including right hepatectomy, Whipple's procedure and laparoscopic liver resections. Dr Richard Sturgess, Director of Digestive Diseases at Aintree, performed a range of complex endoscopic procedures live for the delegates.

Within the Faculty in the Convention Centre, there were contributions from Messrs O'Reilly, Macadam, Welsh, John, Khan, Ward and Wu as well as myself and I am extremely grateful to everyone who gave up their time and expertise to make this such a successful day.

Although, as with all live operating sessions, there were glitches and gremlins in the system, overall the presentations went extremely well and comprehensively covered a wide range of both open and laparoscopic upper gastrointestinal surgery.

Hopefully we may able to re-establish this event as part of the programme of the Scientific Meeting. We understand that efforts have been made for a training day to take place preceding next year's Scientific Meeting in Nottingham and we know that this would be greatly appreciated by our younger colleagues in training.

Graeme Poston
Consultant Surgeon

Day 2 – Scientific Programme Summary

Prof Christophe Mariette spoke on *Minimal invasive surgery for oesophogastric cancer - where are we?*

Prof Mariette gave an overview of the current status of minimally invasive OG surgery. He introduced the topic by pointing out that open resections for oesophogastric cancer can involve significant risk of morbidity and death, the potential benefits of minimally invasive surgery could include less morbidity, less pain, a shorter hospital stay and a quicker recovery.

However, Prof Mariette highlighted that fact that there are few studies comparing the different types of surgery and that there are also several different techniques used in this field of surgery, which make comparisons tricky.

He reviewed the results of several studies and discussed his own study which compared the 30-day post-operative pulmonary complication rate after extended Ivor Lewis procedure between open and laparoscopic gastric mobilisation. The results showed that the laparoscopic approach looks promising - for example, the approach doesn't compromise carcinologic resection - but long-term results are still necessary to shed more light on surgical options.

Prof Mariette concluded by saying that while there was a lack of evidence to show conclusive benefit for the laparoscopic approach, he believes the procedure is safe and feasible but also called for better evidence on outcomes.

Dr Jean-Nicholas Vauthey spoke on *Surgery and chemotherapy for liver tumours - what are the limits?*
Prof Vauthey reviewed several trials of chemotherapy and surgery for liver tumours. He said there was compelling evidence for the continued use of chemotherapy in surgically resected liver tumours.

The BJS Prize Presentations - ten excellent presentations with the BJS prize being awarded to Tom Palser for a presentation entitled *Improving short-term survival and decreasing resection rates for oesophago-gastric between 1998 - 2005: initial findings of the National Oesophago-Gastric Cancer Audit*.

Improving short-term survival and decreasing resection rates for oesophago-gastric between 1998 – 2005: initial findings of the National Oesophago-Gastric Cancer Audit.

Authors: D A Cromwell, T R Palser, K Linklater, R H Hardwick, S R Riley, H Moller, J H P Van Der Meulen

Clinical effectiveness Unit, Royal College of Surgeons of England
London School of Hygiene and Tropical Medicine
Thames Cancer Registry
Addenbrookes Hospital Cambridge
Northern general Hospital, Sheffield

Abstract Content: Introduction. Over the last decade, oesophago-gastric (O-G) cancer services in England and Wales have undergone extensive reorganisation. In addition, advances in imaging technology and chemotherapy regimens, have altered the diagnostic and treatment pathways for patients with O-G cancer. The aim of this study was to analyse changes in the patterns of care and short-term survival of O-G cancer patients since 1998.

Methods: Cancer Registry data on English O-G cancer patients for the years 1998-2005 was collated by the Thames Cancer Registry and, using combinations of NHS number, date of birth, date of death and / or postcode, linked to an extract of the Hospital Episode Statistics (HES) database.

Results: There were 107,524 patients in the linked database, of which 90% had treatment information recorded in HES. The proportion of patients undergoing resection for O-G cancer fell from 28% in 1998 to 20% in 2005, while the proportion of oesophageal cancer patients who underwent neoadjuvant chemotherapy /chemo-radiotherapy rose from 8% in 1998 to 48% in 2005 . One year survival increased for oesophageal tumours from 23% in 1998 to 31% in 2005, for gastro-oespohageal junction tumours from 33% to 43% and for stomach tumours from 30% to 35%.

Discussion: Over the study period, resection rates for O-G cancer decreased while the use of neoadjuvant chemotherapy increased. These changes coincide with an improvement in short-term survival.

Dr Michael Gagnier spoke on *The influence of surgery on abnormal metabolism*.
Dr Gagnier discussed sleeve gastrectomy, an operation which he invented, that causes cure / improvement in diabetes mellitus in 91% of obese patients. He also reviewed other operations in the small bowel that improve diabetes in obese patients.

A symposium on Perioperative care for upper GI / HPB surgery, with contributions from Dr Dermott McKeown, Dr Ashley Guthrie, Prof M Büchler and Dr Don Low.

Dr McKeown gave a clear description of cardiac risk.
Dr Ashley Guthrie gave an informed update on imaging techniques.
Prof M Büchler spoke about setting the standards for the future better reporting of complications in pancreatic surgery.

Surgical Management of Esophageal Cancer
The Value of Standardised Clinical Pathways in an Era of Revolving Perceptions and Reassessment of Outcome Parameters
Dr Low

While the incidence of esophageal adenocarcinoma clearly continues to increase, data released from the American Cancer Society in 2005 documents that three-quarters of patients presenting even with early stage disease, will die in spite of best current efforts. Esophageal resection remains the mainstay for treatment of patients with early-stage and locoregional disease, and although mortality rates have improved, it is still looked upon as a very morbid operation with significant attendant complications and mortality rates.

Standardised clinical care pathways have been demonstrated to facilitate the construction of an orchestrated institutional infrastructure to guide the patients and the care team throughout the entire course of assessment, management and recovery[1]. Highlights within the pathway include the thoracic nurse co-ordinator contacting all patients within 48 hours of referral to carry out an initial telephone interview, assemble current tests and information and plan a co-ordinated and orchestrated visit to Virginia Mason Medical Center.

All patients are also presented at thoracic multidisciplinary tumor board and recommendations are discussed with the patient and transmitted to the referring physicians within 24 hours. Operative approaches are modified according to tumor characteristics and patient physiology and procedures are designed to minimise blood loss[2] and adhere to a previously established approach of conservative intraoperative fluid administration.[3]

These standardised clinical pathways were established at our institution in 1991 and have continued to evolve up to the present time. Published results in 2007 in 340 consecutive patients demonstrated, in hospital, a 90-day mortality rate of .3%, a median hospital length of stay of 10 days. Only 8.8% of patients required transfusions. The incidence of pulmonary complications was 17.1% with only 2% requiring reintubation and less than .5% experiencing respiratory failure.

Progressive improvement over the 15 years of study was seen in mean operative time, blood loss, fluid administration and mean length of stay. Kaplan-Meier five-year survivorship in patients operated on between 1998 and 2004, in Stage I, II, and III patients, was 92.4%, 57.1% and 34.5%, respectively. Possibly, most importantly, the standardised pathways facilitated 98.5% of patients having a patient-controlled epidural catheter, 99.5% being extubated in the operating room and 85.9% being mobilised the day following surgery.

We look on these pathways as a critical aspect to increasing efficiency, achieving goals and improving outcomes in the surgical management of patients with esophageal malignancy.

REFERENCES

1. Low DE, Kunz S, Schembre D, Otero H, Malpass T, Hsi A, Song G, Hinke R, Kozarek RA. Esophagectomy--it's not just about mortality anymore: standardized perioperative clinical pathways improve outcomes in patients with esophageal cancer. J Gastrointest Surg 2007;11:1395-1402.

2. Traverso LW, Shinchi H, Low DE. Useful benchmarks to evaluate outcomes after esophagectomy and pancreaticoduodenectomy. Am J Surg 2004;187:604-608.

3. Neal JM, Wilcox RT, Allen HW, Low DE. Near-total esophagectomy: the influence of standardized multimodal management and intraoperative fluid restriction. Reg Anesth Pain Med 2003;28:328-334.

Affiliates Session

The Affiliates session on Day 2 was well attended and successful.

Sue Colley gave a presentation on the *Development of the UGI Laparoscopic Nurse Practitioner*

Sue detailed her career and how her role has changed within her job description. For example, she can undertake the role of a doctor although she will defer if a doctor wants to do a procedure. Training is a big part of her role for doctors and nurses.

The free papers in the Affiliates Session centred mainly around Bariatric surgery:
Improving the bariatric surgical pathway: The Leeds approach
Copper and protein malnutrition following laparoscopic gastric bypass

A case of Berberi following laparoscopic gastric by-pass surgery
Vitamin A deficiency after laparoscopic duodenal switch

Mary O'Kane's spoke on *Dietetics - Removing the invisibility cloak*. Mary is a dietitian who assesses patients and puts them on the MDT which is held fortnightly. She is the key person for assessing a patient and giving them the information they require prior to surgery.

Dietetics - Removing the invisibility clock
Authors: M O'Kane, J Barth, S Dexter, S Pollard, A Sarela, J Hayden, M McMahon
Leeds Teaching Hospitals NHS Trust

Abstract Content
Introduction: The allied health professionals' (AHP) contribution to patient care is often hidden yet the AHP is well placed to lead aspects of patient care, improve outcomes and decrease costs. This paper will discuss the contribution of dietetic input into the bariatric pathway in Leeds.

Methods: The dietician, as an active member of the obesity MDT, contributed to the service redesign. A referral pro-forma was agreed with a common entry point into the surgical and medical services. The dietician led the development of the patient pathway ensuring that the timelines fit in with the 18-week targets and NICE obesity guidelines. The dietician sees and assesses all new referrals gathering further information. She leads the MDT and presents the patients' cases for discussion about treatment options which may be the surgical route, medical route or return to the GP. She informs both the GP and the patient of the outcome. Obesity surgical clinics were re-organised so both dietitian and a consultant are present. Standard procedures for nutritional monitoring are followed by all. Problems with nutritional parameters are highlighted and the dietician will initiate corrective treatment.

Results: The most appropriate treatment option is agreed with the dietician having an active role. Consultant costs are decreased as patients proceed down the most appropriate pathway.

Conclusion: The dietician plays a more visible role leading aspects of patient pathway. This results in more effective use of resources and improved patient care.

Tom Palser updated the attendees on the National Oesophago-gastric audit. He also mentioned the QOL study which is being undertaken by a few trusts. This will go towards Peer review rather than doing a questionnaire.

Claire Sedgwick presented a national affiliate project which recommends an oesophageal cancer awareness week from April 20-25, 2009. Claire is in talks with transport leads in Newcastle to advertise the week which will culminate in a Ball. AUGIS supports the project.

Day 3 – Scientific Programme Summary

Friday morning started with parallel sessions, a Hepatobiliary Mock Crown Court case plus continuing talks in the main hall.

Anatomy assumed, liability presumed!

Having chosen St George's Hall as the venue for the 2008 Scientific Meeting in Liverpool, the Scientific Committee thought that the listed 19th century Liverpool Crown Court - which forms part of the complex - would be ideal for the HPB parallel sessions on the Friday morning. One thing leading to another, the committee decided that if we were in a courtroom, then the programme needed a trial - and what better subject for an HPB parallel session than bile duct injury at cholecystectomy?

Our challenge was to reduce what would normally be a three to five day process in open court into a 90 minute session which covered all the salient points and also introduced the key aspects of clinical negligence (liability, causation etc) to a largely uninitiated audience. We therefore recruited a local team in Liverpool with the help of Liverpool Civil Law, a barristers chambers specialising in clinical negligence, with myself and Rory McCloy naively putting ourselves forward as "experts" for the defence and claimant respectively.

We based the trial on a real case and concentrated specifically on liability (breach of care). We also added a video of a real bile duct transaction at cholecystectomy to set the scene. The trial papers (expert reports, pleadings, etc.) were circulated electronically to all who expressed an interest before the meeting.

In front of Her Honour Miss Wendy Owen (and 150 delegates) Mr McCloy and I were examined and cross-examined on our reports by Mr Rory Mates for the claimant (Mrs Elizabeth Hardluck) and Mr Charles Feeny for the defence (Mr Canduit FRCS of Anygeneral Hospital).

Mr McCloy's case was that the operating surgeon has a duty of care to identify all relevant anatomy beyond all reasonable doubt before dividing any structure during the course of a cholecystectomy. My argument for the defence was based on the concept of misperception of anatomy, put forward by Larry Way, which states that it is acceptable and forgivable for a surgeon to misperceive anatomy, especially in two dimensions during the course of a laparoscopic cholecystectomy, and that this misperception could be explained by advanced principles of clinical psychology.

Unfortunately, I was unable to convince either Her Honour Miss Owen or the vast majority of HPB surgeons in the audience, and so the reputation of Mr Canduit (who had absconded to Queensland before the trial) went down in flames.

* The Association has produced a DVD of the 'trial' which contains a video of the whole session, with the supporting papers and a beginner's guide to the legal principles of clinical negligence. The DVD is available from the AUGIS office and will also appear

on the AUGIS website. I am extremely grateful to all who put considerable effort into the success of the session and, in particular, to our legal colleagues and their teams from Liverpool Civil Law.

Graeme Poston
University Hospital Aintree, Liverpool

An Oesophagogastric session was held with talks by three invited international speakers:

Dr Michel Gagner - NOTES – How far can we go?
Dr Gagner spoke about the benefits of needlescopic (using 2mm diameter instruments) versus laparoscopic (instruments are greater than 2mm) surgery. He described trans-umbilical endoscopic surgery where intra abdominal surgery is performed by passing flexible instruments via the stomach or vagina.

The risks of leakage, abscess, peritonitis and dyspareunia limit the widespread application of these techniques. It is also limited by increasing cost and the technical difficulty.

Dr Gagnier noted that research into this area of work is driven by industry developing endoscopic devices for weight loss.

He suggested some new nomenclature, for example, laparoscopic assisted NOTES and laparotomy assisted NOTES.

Dr Don Low - *Reassessment of the criteria defining radial resection margins in oesophageal and oesophageal and oesophagogastric cancer - does a millimetre make a difference?*
There is no international agreement on what constitutes a positive resection margin in oesophageal surgery.

In the USA a positive margin is taken as tumour present at the cut margin, whereas the Royal College of Pathologists of England reports a positive margin as tumour within 1 mm from cut margin.

Dr Low compared the outcome in his patients with positive margins using the American and the UK systems. He found that patients who had tumour at the cut margin has a poor prognosis, whereas tumour present within 1 mm of the cut margin is not as strongly related to a poor outcome.

Dr Nicole Bouvy from Brussels spoke on Endoscopic fundoplication - here to stay?
Dr Bouvy spoke about the need for a long-term treatment of gastroesophageal reflux disease.

She believes that there is strong evidence to show that Endocscopic Fundoplication appears to offer better results than previously systems.

The need for a long-term treatment of gastroesophageal reflux disease (GERD) has become increasingly apparent in the past 15 years as a result of a growing prevalence and incidence of this chronic disease.[1-6]

The likelihood of developing GERD increases with the severity of anatomical change and dysfunction of the gastroesophageal (GE) junction, which represents the primary defense against reflux of gastric content into the esophagus.[7-12, 13] Restoration of GE junction competence at the anatomic, mechanic and physiologic levels is critical for an effective long-term treatment of GERD.[2]

Although proton pump inhibitors (PPIs) are effective in controlling GERD symptoms such as heartburn and the healing of reflux esophagitis, studies have demonstrated that up to 50% of patients treated with PPIs continue to have abnormal acid reflux, and up to 35% experience a relapse of symptoms during a 3-year follow-up and required titration with increasing doses of PPIs and later referral for surgery.

Antireflux surgery has been shown to be more effective than pharmacological antisecretory therapies in terms of patient satisfaction, clinical outcome and healthcare cost reduction in the long-term management of chronic GERD.

However, side effects of the antireflux fundoplication procedures frequently compromise otherwise excellent postsurgical results. Persistent dysphagia, inability to belch and vomit, as well as increased bloating and flatulence are common side effects that may persist for more than six months following surgery and prove to be difficult to treat.

To minimise the risk of chronic complications, a variety of factors need to be taken into account, including technical aspects of the operation. “Tailoring” of the valve seems to restore the anatomy, mechanics and physiology of the GE junction more adequately, allowing air to be vented from the stomach without jeopardizing the efficacy of the antireflux barrier.

In an attempt to develop a procedure that mimics antireflux surgery in constructing a fundoplication at the GE junction, restoring the angle of His, and reducing small hiatal hernia with fewer side effects, a novel transoral incisionless device was developed.

The EsophyX™ system with SerosaFuse™ fasteners (EndoGastric Solutions, Redmond, WA, USA) was designed to reconstruct the GE valve through tailored delivery of multiple fasteners during a single-device insertion. The EsophyX device and the corresponding transoral incisionless fundoplication (TIF) procedure were developed based upon the current knowledge and understanding of the anatomic and physiologic functions of the GE junction that was derived from extensive research with open and laparoscopic antireflux surgery.[32]

The technical feasibility and safety of the EsophyX and the first generation of the TIF procedure have been demonstrated in a feasibility study with 19 patients,[32] and its efficacy has been demonstrated in a multicenter prospective study with 86 patients. In both studies, EsophyX-TIF was shown effective in treating patients with chronic GERD, reducing typical and atypical symptoms, eliminating daily PPI dependence, repairing small hiatal hernias, increasing resting pressure at the lower esophageal sphincter (LES), as well as in normalizing esophageal pH and cardia circumference.

The clinical effectiveness achieved in the muticenter study has been further supported by the results from a registry study at the University Hospital at Maastricht (The Netherlands) with a cohort of 38 patients who were unsatisfied with PPIs, required high doses of PPIs, and experienced frequent relapses while on PPIs. Another study conducted at the University Hospital at Maastricht with 10 patients evaluated the safety and antireflux effect of a new generation of the TIF procedure (TIF2).

Evaluation at six months after TIF2 supported restoration of normal anatomy and physiology of the GE junction. As demonstrated in Table 1, the tailored TIF2 resulted in the elimination of heartburn in 78% of patients and regurgitation in 89% of patients. The TIF2 reconstruction of the g junction resulted in a significantly increased pressure and vector volume of the LES and high-pressure zone (HPZ) indicating more competent GE junction. The TIF2 appeared more effective than TIF1 in hiatal hernia elimination, normalization of esophageal acid exposure and healing of esophagitis.

Table 1. TIF1 and TIF2 results from two studies conducted at the Maastricht University Hospital

	TIF1 Phase 2 10 Months (n=38) [34]	**TIF2 Feasibility** 6 Months (n=10) [35]
GERD-HRQL scores normalised	82%	89%
Heartburn eliminated	82%	78%
Regurgitation eliminated	89%	89%
Completely off PPIs	66%	70%
Normalised pH	42%	67%↑↑
Esophagitis eliminated	47%	67%↑↑
Hiatal hernia eliminated	56%	78%↑↑
Median valve circumference (º)	180 (90-270)	235 (170-300)
Valves ≥ 270 º	0%	50%↑↑
Tight valves	60%	90%↑↑
LES resting pressure increase	n/a	120%↑
HPZ resting pressure increase	n/a	127%
LES vector volume increase	n/a	621%

Friday afternoon saw a joint session with short presentations of the five best Posters. The winning poster was on Positron emission tomography standardised uptake values predict prognosis in resectable adenocarcinoma of the oesophagus from Mr J Shenfine

Prof Christophe Mariette spoke on the *Management of oesophogastric cancer - a strategy for the next decade*
Prof Mariette gave a comprehensive review of the current status of the management of oesophageal cases drawing on the knowledge contained in all his recently published papers.

He started by outlining the current situation in which the incident of oesophageal adenocarcinoma of the OGJ is increasing and, despite improvements in screening, diagnosis and treatment, the prognosis is bleak with a five year survival rate of less than 10%.

Prof Mariette identified some key questions for the future:

1. How to select patients for primary, curative, endoscopic treatment?

2. How to select patients for primary curative surgery?

3. How to select patients for primary chemo-radiotherapy?

Prof M Büchler spoke on *Surgical innovation in hepatobiliary and pancreatic surgery*
In this talk, Prof Büchler reviewed the current innovations in pancreatic and hepatic surgery, particularly the move to minimally invasive resection.

For example, he pointed out that laparoscopic liver resection is the most recent surgical innovation in HPB surgery.
He added that it was very important to have minimal donor morbidity and that the most important development in pancreatic surgery is collaboration across Europe in the form of ESPAC trials.