

7B GENERAL SURGERY 2

0161 WHAT IS THE EVIDENCE FOR THE MANAGEMENT OF SMALL BOWEL OBSTRUCTION: ASSESSMENT OF CLINICAL GUIDELINES AND SYSTEMATIC REVIEWS

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Introduction: Small Bowel Obstruction (SBO) accounts for 50% of emergency laparotomies in the UK, and is associated with high rates of morbidity and mortality. We set out to identify evidence from clinical guidelines and systematic reviews on the management of SBO, in order to define areas for future research.

Method: This review was registered with PROSPERO and followed PRISMA guidance. MEDLINE, EMBASE and Cochrane Library databases were searched and 731 abstracts were identified. These were screened by two reviewers, and 25 manuscripts were included for final synthesis. Findings were classified by level of evidence, and categorised into diagnostics, intervention, post-operative care, or special situations.

Result: We identified 4 clinical practice guidelines, 9 meta-analyses and 1 qualitative synthesis.

Diagnostic domains were well described, with evidence for the use of CT scans at (level IIb). Water Soluble Contrast Studies were well described, with indications for diagnosis and intervention (Level 1b). Outcomes of laparoscopic surgery appear favourable in specific settings (level 2c). Special situations addressed SBO in pregnancy, and the use of medical therapies and surgery in malignant SBO (level 2b).

Conclusion: The majority of evidence for management of SBO is based upon retrospective cohort studies. There is a need for further high quality research SBO - Small bowel obstruction

Take-home message:

There are gaps in the evidence base for the management of SBO, including surgical interventions and post-operative care. Well designed trials should be undertaken to address these.

0162 SEGMENTATION AND QUANTIFICATION OF INDIVIDUAL VISCERAL ADIPOSE DEPOSITS USING CT RECOGNITION

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Introduction: Previous segmentation of visceral adipose tissue (VAT) based on CT imaging included intraperitoneal and retroperitoneal compartments only. A re-appraisal of adipose tissue compartments further subdivides them into mesenteric, omental and retroperitoneal segments. Our aim is to obtain a more specific and anatomically correct definition and quantification of abdominal VAT using modelling software.

Method: 11 patients with normal abdominopelvic CT scans were identified. Image segmentation was performed by three independent reviewers, using OsiriX© (Pixmeo, SARL, Bernex, Switzerland) software for DICOM image analysis. Abdominal adipose tissue was segmented into: subcutaneous, right, left, and transverse mesocolon, small bowel mesentery, omentum, and retroperitoneum. Area quantification was obtained from an image at the L5 vertebral body, where segmentation of all other adipose compartments performed. Volume quantification was determined by segmenting the series at equally spaced images. Hounsfield unit (HU) measurements were obtained as displayed in OsiriX.

Result: The average subcutaneous adipose tissue area among all subjects was 201.8107.3cm². Females had a significantly increased subcutaneous adipose tissue area (p=0.035). Mean total VAT volume was 2369.22948.1cm³ with the largest intraperitoneal component being the greater omentum (458.4538.0cm³). There were significant difference between the HU of subcutaneous adipose tissue and the left mesocolon, right mesocolon and small bowel mesentery (p=0.04; 0.03; 0.03). VAT volume segmentation had inter-observer correlation coefficients above 0.991 for all compartments.

Conclusion: Visceral adipose tissue can be segmented into regional compartments in a highly reproducible manner. This technique can now be applied to investigate the roles of regional visceral adipose tissue in disease pathogenesis.

Take-home message:

This study shows that it is possible to segment and quantify visceral adipose tissue in mesenteric, mesocolic, omental and retroperitoneal compartments. This can be used to evaluate potential correlations between visceral adiposity and disease processes, which will aid in characterising relative contributions of localised visceral adipose tissue bioactivity in the pathogenesis of disease.

0163 THE VALUE OF DUODENAL BIOPSIES FOR INVESTIGATING ADULTS WITH ANAEMIA: REAUDIT FOLLOWING A CHANGE TO LOCAL PRACTICE

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Introduction: NICE and BSG recommend all patients with anaemia have serological testing for coeliac disease (CD) and those with positive serology or high clinical suspicion of CD undergo duodenal (D2) biopsies at endoscopy. A local audit in 2013 highlighted that patients with anaemia were not having serology testing and that a large number of potentially unnecessary D2 biopsies were being carried out

at significant cost to the trust. Following this a change to local practice was made. The importance of TTG testing was highlighted to the local PCT and there was local agreement to only perform D2 if certain criteria were met; positive TTG serology, macroscopic D2 abnormalities or high clinical suspicion of CD.

Method: All patients undergoing endoscopy for investigation of anaemia from July 2015-January 2016 were identified retrospectively. CD serology, macroscopic findings and D2 biopsy results were recorded. Cost estimates for serology tests and processing of biopsies were obtained and a potential cost saving estimated.

Result: 471 patients were included. 38% had CD serology testing compared with 28% previously with 0.5% incidence of CD. 41% compared to 81% in 2013 had D2 biopsies. 2.5% were reported as consistent with CD, similar to previous results (2%). A 40% reduction in biopsies saved £16,390 per annum.

Conclusion: This audit demonstrates that patients with anaemia are not having the recommended CD screening tests. The change in local practice with a reduction in duodenal biopsies has not altered the incidence of positive CD results in this cohort and has been cost saving.

Take-home message:

Routine duodenal biopsies for investigating adults with anaemia are rarely informative unless coeliac serology is positive or there is high clinical suspicion of disease. Processing these specimens is costly.

0164 SHORT TERM QUALITY OF LIFE AFTER RESTORING BOWEL CONTINUITY IN PATIENTS WITH SHORT BOWEL AND ON PARENTERAL NUTRITION

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Introduction: Parenteral nutrition and short bowel have an impact on quality of life. This is attributed to frequent admissions to hospital, change in financial status, body image issues, emotional turmoil, a lack of social activity, frequent bowel motions and faecal incontinence. The aim of this study is to determine the impact of restoration of bowel continuity on QOL.

Method: A prospective study using validated QOL health questionnaires (Euro-QoL (EQ-5D-5L) and HPN-QoL). Questionnaires were filled and collected from patients at 1 month pre restoration of bowel continuity and 1, 3 and 6 months post restoration of bowel continuity.

Result: Eleven patients (10 males, median age 55.5 (range 33 - 85) years) were recruited. Median small bowel length was 80 (40 - 150) cm. The median daily stool frequency was 8 (4-20), 3 (1-8) and 2 (1-8) at 1, 6 and 12 months respectively post restoration of bowel continuity Median time to restore bowel continuity was 7 (6 - 12) months. There was a significant improvement in quality of life on both scales following restoration of bowel continuity ($p = 0.002$).

Conclusion: Quality of life improves after restoration of bowel continuity.

Take-home message:

In patients with a short bowel, quality of life improves after restoring bowel continuity.

0165 SURGICAL WOUNDS HEALING BY SECONDARY INTENTION: CHARACTERISING THE PROBLEM, THE IMPACT ON PATIENTS' QUALITY OF LIFE AND IDENTIFYING EFFECTIVE TREATMENTS

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Introduction: this prospective cohort study aimed to identify the clinical and surgical characteristics of patients with surgical wounds healing by secondary intention (SWHSI), and assess the effects these wounds have on patients' quality of life and the relative effectiveness of different treatments.

Method: Baseline patient, surgery and wound data, and quality of life using the SF12 were recorded. Primary outcome included healing rates and time to healing. Secondary outcomes included key events e.g. SWHSI infection, hospital admission, and a return to operating theatre. Patient, surgery, wound and treatment factors associated with healing were included in a multivariate logistic regression analyses.

Result: 393 patients, 222 (56.5%) men, median age 55 (range 19-95) years were recruited. Median follow up was 528 (range 13 - 651) days. Median baseline SWHSI size was 6 (range 0.01-1200) cm². Abdominal (n=132), foot (n=59), and leg (n=58) wounds were common. Colorectal (n=156, 39.7%) and vascular (n=82, 20.9%) surgery were the most common surgical specialities. 320 (81.4%) patients healed with a median time to healing of 86 (range 8 - 501) days. Factors associated with lower healing rates and prolonged healing times included SWHSI infection and area above the median. SF12 scores were low at baseline but improved with time and healing. Negative pressure wound therapy did not significantly impact on healing healing.

Conclusion: Patient, surgery and wound characteristics have been clearly defined, as have factors associated with poorer healing outcomes. The efficacy of an increasingly utilised topical treatment for SWHSI has been called into question.

Take-home message:

Surgical wounds healing by secondary intention are a significant problem to patients and the NHS. We have characterised patient and surgical factors associated with SWHSI and identified factors associated with healing.

O166 DAY CASE HEMITHYROIDECTOMY AUDIT: 1 YEAR RETROSPECTIVE AUDIT TO ASSESS OUTCOMES AND VIABILITY OF DAY CASE OPERATIONS

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Introduction: In 2000 the NHS set a target of performing 75% of elective surgery as day case. In 2001 the British Association of Day Surgery added thyroidectomy to the list of day case procedures. There are many benefits of day case surgery, including improved patient experience, reduced cancellation risk and financial savings. However, there has been very limited adoption of day case thyroidectomy in UK centres. The aim of the audit was to assess the outcomes and viability of day case hemithyroidectomy surgery.

Method: This was a retrospective audit comprising all patients undergoing hemithyroidectomy at Peterborough City Hospital in 2015. Demographic data were collected from scanned notes and discharge summaries. Data collected included: indication for surgery, pre-morbid status, ASA, use of drain, technical difficulties, distance from hospital, length of stay and complications.

Result: 64 patients underwent a total of 66 hemithyroidectomy operations in 2015. 42 (63.6%) patients were identified as potentially suitable for day case procedures according to American Thyroid Association criteria. Amongst these patients, 37 (88%) were discharged after one night, three patients stayed two nights and two stayed three nights. High drain output was the commonest reason for delaying discharge. There were three complications in the group potentially suitable for day case surgery: one neuropraxia, one wound infection and one wound swelling.

Conclusion: Day case hemithyroidectomy was suitable for a high proportion of patients in 2015. The majority of these patients stayed only one night and could possibly have been discharged on the same day.

Take-home message:

Day case hemithyroidectomy was suitable for a high proportion of patients included in the audit.

O167 DURATION OF SURGERY AND ANAESTHESIA DOES NOT EFFECT LENGTH OF STAY IN ADRENALECTOMY

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Introduction: Functional and non-functional adrenal masses may require surgical resection. Adrenal surgery is a challenging intervention with complex anaesthetic and surgical considerations. We reviewed factors that influence AT and ST in adrenalectomy and whether these impact on LOS.

Method: Adrenalectomies undertaken by a single surgeon at a tertiary referral centre between 10/2007 and 02/2016 were identified from a prospective database. Theatre-man reports to determine AT and ST. AT/ST in median minutes, LOS median days.

Result: n = 135 adrenalectomies, 50 Male:85 Female, median age of 60 (20-80). AT across adrenal surgery was 329.4 with a ST of 213. Non-functional nodules (n = 51) had a longer AT (376 vs 326) and ST (264 vs 208) than functional nodules (n = 84). In non-functional nodules 12/51 (23.5%) were open/converted vs 7/84 (8.3%) in functional. Both had identical LOS (5). In functional nodules AT was longest in PH, CS then CO at 334, 305 and 270. The same was observed in ST with PH, CS and CO requiring 243, 193 and 154 respectively. LOS was 5 in both functional and non-functional nodules however in functional LOS varied by diagnosis: PH 6, CO 5, CS 4.

Conclusion: Non-functional nodules had longer AT and ST, were larger than functional nodules (65 vs 50mm) and more likely to be open however LOS was identical. Except for pheochromocytoma laparoscopic surgery had a shorter AT as less invasive monitoring is required. AT (Anaesthetic Time) ST (Surgical Time) LOS (Length of Stay) PH (Pheochromocytoma) CS (Cushing's) CO (Conn's)

Take-home message:

Adrenal surgery can be complex and often requires a sub-specialist anaesthetist to optimise patient care, our experience at a tertiary referral centre suggests that in a large cohort overall length of stay is not altered by functional status of lesion, operative time or anaesthetic time.

O168 THE MANAGEMENT AND REFERRAL OF ILIO-FEMORAL DVTS IN NORTH-WEST LONDON

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Introduction: Over half of patients with ilio-femoral deep vein thrombosis (IFDVT) will go on to develop post-thrombotic syndrome. Existing evidence suggests that the risk of further complications can be

reduced with thrombolytic therapy or mechanical thrombectomy. NICE guidelines recommend consideration of catheter-based thrombolytic therapy in patients with symptomatic IFDVT. We aimed to identify whether IFDVT patients are being offered the correct treatment pathway.

Method: A multi-centre retrospective study was conducted at 3 north-west London hospitals, which were spoke hospitals in their local vascular service networks. Proximal DVT patients from a one-year period were identified using ICD-10 coding, and data extracted from electronic and paper medical records.

Result: Thirty-seven IFDVT patients were identified (16 male, 21 female, median age 72 years), with 30 patients (80%) being symptomatic. Only 7 patients (19%) were referred to a regional vascular unit; of these, 4 patients were not deemed suitable for intervention. 8 patients in total (22%) underwent thrombolytic therapy.

Conclusion: Although the majority of IFDVT patients were symptomatic, only a small proportion of these received early thrombus removal (22%) or referral to vascular services (19%) to assess suitability of thrombolysis. Adherence to the NICE guidelines could be improved by increasing awareness amongst A&E and medical colleagues.

Take-home message:

Only a small proportion of ilio-femoral DVT patients underwent early thrombus removal or referral to vascular services as recommended by NICE. Adherence to the guidelines could be improved by increasing awareness amongst A&E and medical colleagues