and the neutrophil lymphocyte (N/L) ratio may predict surgical outcome.

Methods A retrospective review of consecutive unselected patients aged 80 years or over undergoing emergency abdominal surgery over a 22-month period was performed. Univariate, multivariate and recursive analyses were performed and findings validated using an independent data-set.

Results 88 patients were identified, median age 84 years. 30-day mortality was 31%, 6-month mortality 45% and 12-month mortality 50%. Univariate analysis revealed age, N/L ratio, CRP, midline laparotomy, ASA and surgical risk score to predict outcome at set time points. Using a recursive approach N/L ratio > 22 (p = 0.0018) best predicted 30-day outcome. On multivariate analysis, N/L ratio was an independent predictor of 30-day outcome (p = 0.004, df = 1, χ² = 8.144) while CRP failed to predict outcome at any time point. In an independent dataset (n = 84), N/L ratio was an independent prognostic factor at 50 days (p = 0.001, df = 2, χ² = 15.071), 6 months (p < 0.001, df = 1, χ² = 12.536) and 12 months (p = 0.004, df = 1, χ² = 10.27).

Conclusion We suggest that N/L is an easily calculable pre-operative measure that may have utility in the prediction of outcome after emergency abdominal surgery in the elderly. Further work to validate this measure in a larger, prospective setting and determine why N/L ratio predicts outcome is necessary.

Competing interests None declared.

Small bowel I

PTU-142 SMALL BOWEL CAPSULE ENDOSCOPY: A REVIEW OF 232 STUDIES UNDERTAKEN AT A SINGLE CENTRE doi:10.1136/gutjnl-2012-302514c.142

A M Verma,* R Ramiah, D Legge, A Dixon. Gastroenterology, Kettering General Hospital, Kettering, UK

Introduction Capsule endoscopy (CE) is the modality of choice for investigating small bowel pathology. It is non-invasive, tolerated and safe and reliable. The BSG has issued guidance on the use of CE for patients with obscure gastrointestinal bleeding (OGB) and for patients with a high suspicion of small bowel Crohn’s disease undetected by conventional means, in Kettering General Hospital (KGH) CE has been used extensively for this as MR enteroclysis is not available. KGH introduced a CE service in 2008. In 3+ years, 232 studies have been reported. KGH uses Diagnmed/Given PillCam 2 CE. Patients take two sachets of Klean prep prior to their study. Patients do not undergo patency capsule testing. Patients take the capsule and using a laptop computer, a real time image is visualised, ensuring the capsule has passed into the small bowel. Patients are sent home and keep the recording belt and box on for 12–15 h. If capsule does not pass into small bowel patients are given a prokinetic and if that fails they undergo a gastroscopy to introduce the capsule into the distal duodenum (rarely required).

Methods Demographic data, indications, quality of bowel preparation and diagnosis is recorded in a database. This has been analysed using Microsoft Excel.

Results Overall: 252 studies, mean age = 54.95 years, median = 57.31 years. 114 males, mean age = 57.83 years, median = 60.80 years. 118 females, mean age = 52.07, median = 52.5 years. Yield of pathology = 100 studies (43.10%). 3 capsules retained (1.72%): 2 strictures, 1 trapped in diverticulum. Obscure GI bleeding/anaemia as an indication: 174 studies, yield = 72 studies (41.38%). Diagnoses: angioectasia 15, erosions/ulcers 11 (gastric 3), Crohn’s disease 6, tumours 6, active bleeding 5, polyposis 5, stenosis/stricture 5. Other indications: 58 studies: Crohn’s disease 46 (yield = 22/47.83%), known Crohn’s 6, abnormal imaging = 3, other = 3.

Conclusion This series of CE studies reveals a yield of 43.10% with a low capsule retention rate of 1.72%. As these patients have had multiple investigations (endoscopies/cross sectional imaging) it suggests that in patients with suspected small bowel pathology, CE is very useful (with a high yield) and safe. For OGB the yield is 41.38% with common diagnoses being angioectasia, ulcers/erosions. Occasionally active bleeding, polyps and tumours are seen. This confirms the importance of CE in investigating OGB. For suspected Crohn’s disease the yield is high (47.83%). This confirms that as long as patients don’t have symptoms of sub-acute small bowel...
obstruction, CE is a very useful diagnostic modality for small bowel Crohn’s disease.

Competing interests None declared.

REFERENCE

PTU-143 QUICKVIEW IN CAPSULE ENDOSCOPY: IS IT ENOUGH?


Introduction Analysis of small-bowel capsule endoscopy (SBCE) is time consuming. QuickView (QV) has been added to the RAPID® software to reduce reading times. Its validity though has been questioned.1, 2 We have recently showed that Blue Mode (BM) application provided image improvement for different lesion categories.3

Aim To assess the validity of QV with white light (QVWL) and QV questioned.12 We have recently showed that Blue Mode (BM) application provided image improvement for different lesion categories.3

Methods Retrospective study; all SBCE for OGIB (August 2008–November 2011), performed with PillCam®SB, with complete small-bowel visualisation were included. A clinician with SBCE experience (≥200), unaware of the capsule endoscopy reports, reviewed prospectively the SBCE video streams on RAPID® (ver. 7) platform using QVWL and QVBM. All SBCE were previously reported using standard viewing mode; these reports were taken as reference. Findings were labelled as P0 (non-pathological), P1 (low/intermediate) and P2 (high bleeding potential) lesions. Sensitivity, specificity, negative and positive predictive value (NPV and PPV) for QVWL and QVBM, as compared to reference review, for clinically significant (P1/P2) lesions was calculated.

Results A total of 106 SBCE were analysed. Indications were: overt OGIB in 21 and occult OGIB/IDA in 85. With QVWL, P4 [P0 (28), P1 (18), P2 (8)] lesions were detected; 65 [P0 (48), P1 (13), P2 (2)] with QVBM, as compared to 98 [P0 (67), P1 (25), P2 (8)] by standard (reference) reporting. For P1+P2 lesions, the sensitivity, specificity, NPV and PPV for QVWL was 92.3, 96.3, 96 and 92.8%, respectively. For QVBM, the above values were 91, 96, 96.2 and 90.6%, respectively. The mean evaluation time (including reading and time to mark thumbnails) was 443 and 453 sec for QVWL and QVBM, respectively.

Conclusion When urgent BM of SBCE is necessary, for further immediate management planning, the QV mode can be trusted to safely and accurately provide an accurate (almost on-the-spot) diagnosis in most cases. In this setting, BM does not confer any additional advantage over WL. QV has high PPV (all P2 lesions were detected), but the NPV was just above 90% which indicated that QV can miss certain lesions (P1) thus necessitating further capsule review using the standard mode of SBCE.

Competing interests None declared.

REFERENCES

PTU-144 SMALL-BOWEL CAPSULE ENDOSCOPY FOR IRON DEFICIENCY ANAEMIA ALONE: EXPERIENCE FROM A TERTIARY CENTRE

doi:10.1136/gutjnl-2012-302514c.144

1 O Eung, 1 J H Lam, 2 S Douglas, 4 A Koulaouzidis, * 1, 2 J N Plevris. 1 Medical School, University of Edinburgh, Edinburgh, UK; 2 Centre for Liver & Digestive Disorders, Royal Infirmary of Edinburgh, Edinburgh, UK

Introduction Small-Bowel Capsule Endoscopy (SBCE) is a useful diagnostic modality in the investigation of Obscure Gastrointestinal Bleeding (OGIB). Its role though in Iron Deficiency Anaemia (IDA) is less clear.

Aim To assess the usefulness of SBCE in the diagnostic work-up of patients with IDA with neither complicating pathology nor specific GI symptomatology.

Methods Design: Retrospective study. Setting: University hospital & tertiary referral centre for capsule endoscopy for South East of Scotland. A review of SBCE database was carried out for the period between March 2005 and June 2011. Only patients with IDA and no other GI symptoms or known previous diagnosis contributing to IDA for example, Crohn’s or coeliac disease were included in the analysis. Electronic and paper case notes were reviewed for information relating to procedure indications, investigations carried out prior to SBCE and subsequent findings. Cases with failed examinations due to SBCE retention and/or incomplete small-bowel transit were excluded from further analysis. SBCE findings were classified as clinically significant (small-bowel malignancy, significant inflammation and/or strictures and coeliac disease) or clinically relevant pathology that is, angioectasias (P1/P2 lesions).

Results A total of 511 SBCE examinations were performed during the above period. IDA as the sole indication for SBCE was recorded in 27% (n=221), 151F/70M, mean age: 62 yr patients. All patients had bi-directional endoscopies prior to SBCE. The overall diagnostic yield (DY) of SBCE was 30.7% (68/221). The DY for significant pathology and angioectasias was 9% and 21.7%, respectively. In those ≤40 yr (n=20; 13F/7M, mean age: 26.5 yr), significant pathology was found in 25% (5/20); in the >40 yr group (n=201; 138F/63M, mean age: 72.2 yr), significant pathology was found in 7.5% (15/201), p=0.0231. Although none of the patients ≤40 yr had angioectasias, P1 or P2 lesions were found in 4/521 (21.7%) of those >40 yr, p=0.009. Age-range analysis showed angioectasias in 11.1%, 13%, 20% and 42% in the age-groups 41–50, 50–60, 60–70, 70–80 yr, respectively. Interestingly, in those >80 yr (n=16; 12F/4M, mean age: 82.5 yr) angioectasias were present in 50% of SBCE but no significant pathology was identified.

Conclusion IDA alone is one of the main indications (27%) for referral to the SBCE service of our centre with the majority of referrals coming from the >40 age group. In our cohort, the overall DY of SBCE for IDA is 30.7% and the commonest finding small-bowel angioectasias. The detection rate of significant small-bowel pathology for those >40 yr is low decreasing to zero in the >80 age group. In contrast, 25% of patients ≤40 yr had a significant or sinister diagnosis made with SBCE.

Competing interests None declared.

REFERENCES
1 A Koulaouzidis; * 2 Giannakou, 6 Rondosnitt. 1 Centre for Liver & Digestive Disorders, Royal Infirmary of Edinburgh, Edinburgh; 2 School of Social & Community Health, 3 University of Edinburgh, Edinburgh, UK; 4 Smirnidis, 5 A Koulaouzidis, * 6 Rondosnitt. Centre for Liver & Digestive Disorders, The Royal Infirmary of Edinburgh, Edinburgh, UK.