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ATU-03 REVIEW OF ENDOSCOPIC DIAGNOSIS AND MANAGEMENT OF SMALL RECTAL NEUROENDOCRINE TUMOURS IN A TERTIARY CENTRE

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Introduction The incidence of neuroendocrine tumours (NETs) is increasing with a heightened awareness of the malignant potential of rectal NETs. There is a need to improve the endoscopic recognition of NETs at earlier stages but there is a lack of data to compare the available endoscopic interventions.

Methods A review was undertaken using a prospectively collected database of all patients undergoing endoscopic treatment for rectal NETs between January 2010 and January 2019. Demographics and procedural data including histology reports were retrieved and reviewed.

Results 24 patients (10 female; median age 56 [range 33–73]) underwent endoscopic treatment for 24 rectal NETs. The median size, estimated during endoscopy was 5 mm (range 2–15 mm). Ten NETs (42%) were incidentally detected at bowel cancer screening procedures. During index procedures, 7 (29%) lesions were correctly described as submucosal tumours (SMT) and 3 (12%) as NETs. The remaining 14 (59%) were described as polyps.

Biopsies were taken in 15 cases, of which histological diagnosis was made in 12/15 (80%). The 3 remaining biopsies were reported as normal colonic mucosa. Endoscopic therapy was attempted during 14 index procedures; cold biopsy (5), hot snare (3), endoscopic mucosal resection (EMR) (6). All 14 NETs were incompletely resected (R1) and subsequently had ESD as definitive therapy (R0). In 2 cases EMR was attempted as definitive therapy following index procedure, however also required subsequent ESD to achieve R0 resection. The 8 remaining NETs were successfully resected (R0) with endoscopic submucosal dissection (ESD) (7) or ligation-assisted EMR (Duetto® Multi-Band Mucosectomy device, Cook Medical Ltd) (1).

All patients were referred to the surgical NET specialist team for ongoing management and monitoring. Surveillance endoscopy has been performed in 18 patients (median 16.5 months [range 6–81]) with no endoscopic evidence of recurrence.

Conclusions Ten (42%) rectal NETs were discovered early due to bowel cancer screening programs. Endoscopic recognition of SMTs can be improved by confirming a type 1 Kudo pit pattern and firmness to palpation. With careful endoscopic assessment of SMTs, biopsies were not essential for diagnosis, despite a high positive rate. We recommend biopsying suspected lesions if unsure. Small rectal NETs should be treated

with either ESD or ligation-assisted EMR for complete resection.

ATU-04 ANATOMICAL FACTORS AFFECTING EASE OF COMMON BILE DUCT CANNULATION AND EFFICACY OF SPHINCTEROTOMY DURING ERCP

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Introduction During ERCP (Endoscopic Retrograde Cholangiopancreatography), endoscopists make an initial assessment of the major duodenal papilla (MDP) to determine the optimal approach for common bile duct (CBD) cannulation and a safe limit for sphincterotomy. Cannulation requires initial engagement followed by an angular adjustment, the step angle, to attain deep cannulation. This angle plays an important role in determining the ease of CBD cannulation. A sphincterotomy should be long enough to effectively open the ampullary orifice to allow passage of instruments and extraction of duct calculi whilst avoiding the complication of retroperitoneal perforation. This study correlates MDP morphology with the step angle and intramural CBD length to assist endoscopists in predicting ease of cannulation and safe extent of sphincterotomy.

Methods Analysis of 100 videos of successful CBD cannulation yielded a novel classification based on increasing prominence of the MDP. Four types were defined: I, flat (flush with duodenal wall); II, prominent (elevated on duodenal wall); III, infundibular (has an infundibulum); and IV, dependent (mobile with inferior facing orifice). After the MDPs in 40 cadaveric specimens had been classified as above, the step angles were measured using wire cannulation and intramural CBD lengths were measured following dissection. Correlations between these parameters were assessed using paired t-tests and one-way analysis of variance.

Results An increasing mean step angle from MDPs of Types I to IV was identified. A significant angular adjustment was required in Types II, III and IV ($P < 0.05$) but not in Type I. The mean intramural CBD length was also found to increase with MDP Type: I (5.53 ± 3.08 mm), II (7.51 ± 2.64 mm), III (9.79 ± 1.58 mm) and IV (11.19 ± 2.56 mm). These results corroborate the progressive nature of the proposed classification system. Of note, non-consecutive MDP types were found to have significantly different intramural CBD lengths.

Conclusions The above results demonstrate that MDP morphology may be of value in predicting a safe extent of sphincterotomy and could also allow endoscopists to predict whether an angular adjustment would be required during CBD cannulation. Our findings also indicate the need for further studies to explore the relationship between MDP morphology and specific challenges during ERCP.