

procedure has the potential to improve issues with colonoscopy capacity and diagnostic workforce in the NHS, with a larger scale study now needed. We have previously published on the training requirements and learning curve for the novel colonoscopy procedure and will also present data on computer aided analysis and interpretation of findings at colonoscopy.

AWE-02 MORPHOLOGICAL AND MOLECULAR MARKERS FOR COEXISTENT ADENOCARCINOMA IN LOW-GRADE DYSPLASTIC AREAS OF HIGH-GRADE COLORECTAL ADENOMAS

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Introduction Successful endoscopic resection (ER) relies on endoscopic diagnosis to predict the risk of invasive cancer. However, a detailed evaluation of histopathological features and the molecular profile of the dysplastic mucosa to predict coexistent invasive cancer is not available.

Methods ER of large colorectal adenomas (2011–2016) were analysed. A subset containing high-grade dysplasia, intramucosal cancer or invasive cancer was identified and subjected to detailed histopathological analysis: ulceration, distribution of high-grade dysplasia, dysplastic nuclear grade, presence/distribution of necrosis, and distribution of tumour-infiltrating lymphocytes (TIL). Microdissection, DNA extraction and next-generation sequencing using a human clinically relevant tumour panel of 24 genes were performed separately for two areas with the highest morphological grade from each lesion.

Results ER was performed for 418 large (≥ 20 mm) adenomas. Histopathological genetic evaluation was available in 70 high grade cases. Coexistent adenocarcinoma significantly correlated with adenomatous mucosa featuring ulceration, mixed interface/interstitial TIL, multifocal high nuclear grade, infiltrative edges, and multifocal intraluminal necrosis. Multifocal intraluminal necrosis and high nuclear grade in the adjacent low-grade dysplastic mucosa were driven by cooperative genetic abnormalities of high-impact (FLT4), moderate impact (KRAS/NRAS for infiltrative edges, FLT4, TP53, ERBB2), and low impact (FGFR3, PDGFA).

Conclusions The dysplastic stage of high-grade adenomas is characterized by multiple cooperative genetic mutations. A subset of these identify a risk of coexistent adenocarcinoma with a close correlation between genetic markers of angiogenesis (FLT4), receptor activation (RAS/ERBB2), genome maintenance (TP53) and stromal reaction (FGFR3, PDGFRA) with morphological features defined by high nuclear grade, intraluminal necrosis, and inflammatory stromal reaction.

AWE-03 MANAGEMENT OF PANCREATIC WALLED OFF NECROSIS WITH LUMEN APPOSING METAL STENTS: UK SINGLE CENTRE EXPERIENCE

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Background Endoscopic ultrasound (EUS)-guided transmural drainage is the preferred treatment for symptomatic pancreatic

walled-off necrosis (WON). Lumen apposing metal stents (LAMS) are increasingly used, although their advantage over plastic stents remains unclear. Placement of a plastic pigtail stent within the LAMS may help maintain patency and help avoid the need for subsequent endoscopic necrosectomy. We aim to describe the success and complication rates for the use of LAMS in the management of WON.

Methods All patients undergoing EUS-guided cystgastrostomy using LAMS for WON between July 2015-January 2019 were included. Data collected included procedural technique, rates of technical and clinical success and complications. All patients had up to date CT or MR scans and all were reviewed in the specialist MDM prior to intervention.

Results 40 patients underwent LAMS placement for WON, 75% male, median age 53 years (range 23–79). The aetiology of pancreatitis was: gallstones (n=17), alcohol (n=12), idiopathic (n=9) and post-ERCP (n=2). Mean collection size on pre-procedure imaging was 12 cm (range 4–22). 21 (52.5%) procedures were performed under general anaesthesia, 14 (35%) propofol sedation and 5 (12.5%) conscious sedation. LAMS were placed from the stomach (n=38, 95%) or duodenum (n=2, 5%) and were successfully deployed in 39 (98%). LAMS diameter was 8 mm (n=7), 10 mm (n=5), 12 mm (n=1), 15 mm (n=24) and 20 mm (n=3). Pigtail stents were placed within the LAMS in 14 cases (35%) but did not significantly alter the need for subsequent endoscopic necrosectomy (28% with pigtail stent vs 27% without). Follow up CT demonstrated a reduction in collection size in all cases with a mean maximal diameter of 2.6 cm (0–5 cm).

Successful drainage was achieved in 98% at 3 months (1 patient died from complications of acute pancreatitis, unrelated to stent placement) and no patient required percutaneous or surgical drainage. There were two complications; 1) late migration of the gastric flange into the collection, presenting with sepsis 6 weeks post insertion and successfully retrieved following placement of a second LAMS and 2) buried gastric flange, leading to delayed LAMS removal and successfully retrieved 7 months post insertion after transmural tract dilation using large diameter biopsy forceps. Median time to LAMS removal was 51 days (range 26–80). LAMS remained in situ for 21 months in one patient lost to follow-up but was removed without complication.

Conclusion Transmural drainage of pancreatic WON using LAMS has excellent rates of technical and clinical success with few complications. Unlike in other published series, we did not observe any late bleeding complications. In our cohort, placement of a pigtail stent through the LAMS did not negate the need for subsequent endoscopic necrosectomy.

AWE-04 NEAR-FOCUS NBI CLASSIFICATION OF VILLOUS ATROPHY IN SUSPECTED COELIAC DISEASE: INTERNATIONAL DEVELOPMENT AND VALIDATION

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