beneficial: a more formal study to assess the difference in GERD detection between WPM and impedance may be useful.

Gastroduodenal

OFR-4 CYTOSPONGE-TFF3 FOR THE DETECTION OF PREMALIGNANT STOMACH: A COHORT STUDY FROM THE BEST3 TRIAL

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10.1136/gutjnl-2021-BSG.21

Introduction Cytosponge is a pill on a string device that collects cells from the upper gastro-intestinal tract and is tested for intestinal metaplasia (IM) with the immunocytochemical TFF3 marker. Gastric IM (GIM) and atrophy (GA) are precursor lesions to gastric adenocarcinoma and require endoscopic surveillance. Non-invasive methods to detect gastric precancerous conditions are currently lacking. We aimed to evaluate the ability of Cytosponge-TFF3 to detect GIM/GA in the stomach. **Methods** We analysed data from 292 individuals who received a Cytosponge-TFF3 test and a subsequent endoscopy with gastric biopsies as part of the BEST3 trial (Fitzgerald et al. Lancet 2020). Patients with endoscopic or histological evidence of Barrett's oesophagus (BO), IM at the gastro-oesophageal junction or with biopsies exclusively from fundic-type polyps were excluded. Endoscopic biopsies were assessed for the presence of atrophy or IM. The presence of GA/GIM was compared in TFF3 positive (TFF3+) and TFF3 negative (TFF3-) patients using Fisher's exact test. P-values <0.05 were considered significant.

Results 20% of participants (n=57) met the study inclusion criteria. Of these, 44 were TFF3+ and 13 were TFF3-. The two groups did not differ in terms of age, sex and race (Table 1). In the TFF3+ and TFF3- groups, 84% and 77%,

respectively, received proximal stomach biopsies, while the remaining patients had distal gastric biopsies only. In the TFF3+ group, 15 patients were diagnosed with GA and/or GIM, of which 4 had isolated cardia IM. One TFF3+ patient had early gastric adenocarcinoma and received curative endoscopic resection. None of the patients in the TFF3- group was diagnosed with GA/GIM. TFF3 positivity was significantly associated with the presence of GA/GIM in gastric biopsies (p=0.013).

Conclusions Our data suggest that the Cytosponge can detect IM in the stomach. Patients with positive Cytosponge but no BO at endoscopy should receive vigilant inspection of the stomach and mapping biopsies to exclude premalignant lesions. The false positive rate in the TFF3+ group is likely related to the lack of Sydney protocol biopsies in this patient cohort. Prospective studies in high-risk populations for gastric cancer could be considered to test the Cytosponge screening method for premalignant stomach lesions.

OFR-5 SURVEILLANCE AND ENDOSCOPIC RECOGNITION OF GASTRIC INTESTINAL METAPLASIA AND ATROPHIC GASTRITIS

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10.1136/gutjnl-2021-BSG.22

Introduction Endoscopic recognition of GIM and GA is challenging and little is known regarding adherence to surveillance guidelines in Western centers, particularly those with low incidence of gastric adenocarcinoma. The aim of this study was to evaluate endoscopic recognition and adequacy of surveillance for GIM and GA.

Methods We retrospectively analyzed patients diagnosed with GIM or GA in two academic centers in The Netherlands and UK between 2012 till 2019. Cases with GIM/GA diagnosis at index endoscopy were retrieved through systematic search of pathology databases using 'gastric' and 'intestinal metaplasia' or 'atrophy' keywords. Endoscopy reports were analyzed to ascertain endoscopic diagnoses. Adequacy of surveillance was assessed based on ESGE guidelines published in 2012 at the index endoscopy. Criteria include: GA/GIM of the proximal stomach, any location of GA/GIM with a positive family history for gastric cancer or persistent *Helicobacter pylori* infection. Surveillance was also adequate if patients were discharged if pan-gastric sampling showed only GA/GIM of the distal stomach without risk factors or when age was above 75 years.

Results We included 318 patients with a median follow-up of 53 months. Patient characteristics are shown in table 1. Endoscopic recognition rates were 61,1% for GA and 17,4% for GIM. Surveillance was adequately carried out in 139 of 318 patients (43,7%). During follow-up two patients (0,6%) developed gastric cancer after the detection of GIM, which gives an incidence of 0,14 per 100 patient years.

Conclusions Adequate surveillance of GIM and GA according to current guidelines was under 50% in two academic centers

Abstract OFR-4 Table 1

	TFF3+ (n=44)	TFF3- (n=13)	p-value
Age [Mean in Years]	71.7	74.1	0.37
Sex [Male:Female] (% Male)	32:12 (72.7)	7:6 (53.8)	0.31
Race [White:Non-White] (%)	42:2 (95.5)	13:0 (100)	1.00
Proximal gastric biopsies (%)	37 (84.1)	10 (77.0)	0.68
Distal gastric biopsies only (%)	7 (15.9)	3 (23.1)	0.68
Normal findings (%)	29 (65.9)	13 (100)	0.013*
Gastric atrophy (%)	5 (11.4)	0 (0)	0.58
GIM (%)	14 (31.8)	0 (0)	0.025*
Cardia IM (%)	5 (11.4)	0 (0)	0.58

Abstract OFR-5 Table 1

	N=318
Mean age (years)	66
Sex (female)	166 (52%)
Intestinal metaplasia	60 (19%)
- None	53 (17%)
- Proximal	101 (32%)
- Distal	68 (21%)
- Both locations	36 (11%)
- Present, location unknown	
Only gastric atrophy	60 (19%)
H.pylori present	48 (15%)
Family history of gastric cancer	14 (4%)
- Yes	156 (49%)
- No	148 (47%)
- Unknown	

in countries with a low incidence of gastric cancer. The rate of endoscopic recognition of pre-cancerous lesions, is low. The results of this study suggest that substantial improvement is required in adherence to guidelines for surveillance and endoscopic training in detection of pre-malignant conditions.

Pancreas and neuroendocrine

OTU-17 EXPRESSION, CLINICAL AND PROGNOSTIC VALUE OF DUAL SPECIFIC PROTEIN PHOSPHATASE-7 (DUSP-7) IN PANCREATIC CANCER

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10.1136/gutjnl-2021-BSG.23

Introduction Dual Specific Protein Phosphatases (DUSPs) are a family of proteins that dephosphorylate both tyrosine and serine/threonine residues in biological systems and play multiple and diverse role in cells. The clinical impact of the protein phosphatase family has not been well explored in solid tumours. The present study investigated the role of DUSP-7 (also known as PYST2), a protein phosphatase that dephosphorylates mitogen activated protein kinase (MAPK), c-Jun N-terminal kinase (JNK) and p38 which are important regulators of solid tumours and cancer cells, in pancreatic cancer.

Methods Pancreatic cancer tissues from patients who underwent resections were obtained immediately after surgery, stored and subsequently processed for quantitative analyses of DUSP-7 gene transcript. The expression levels were correlated with the survival and pathological parameters of the patients. Human pancreatic cancer cell line, PANC1 was used in creation of a DUSP-7 knockdown (by way of siRNA) cell model and was assessed for the impact of DUSP-7 on the biological functions by various cell based assays.

Results Pancreatic tumour tissues displayed significantly lower levels of DUSP-7 transcript than normal tissues ($p=0.0031$). Kaplan-Meier Survival analysis showed that patients with high levels of DUSP-7 had a significantly longer survival than those with low levels ($p=0.021$ (Mansel-Cox log rank test), mean survival 30.2 months for high levels *vs* 17.0 months for low

levels). This survival benefit was particularly seen in tumours with low levels of Her-2 expression. It is noted that while high grade tumour had low levels of DUSP-7, the same trend was found with TNM tumours of which high TNM tumours had lower DUSP-7. Tumours with metastatic lymph nodes had marginally higher levels of DUSP-7 than node negative tumours. The presence of microvascular embolism ($p=0.015$) and levels of DUSP-7 ($p=0.044$) were two prognostic indicators of the patients. Knocking down DUSP-7 from PANC1 cancer cells rendered the cell to be less mobile and less adhesive as assessed by way of electric cell-substrate impedance sensing (ECIS).

Conclusions Dual Specific Protein Phosphatase, DUSP7/PYST2 is aberrantly expressed in pancreatic cancer and is a positive survival indicator of the patients.

OTU-18 SILENCE OF THE LAMS: REDUCING RISK IN EUS GUIDED DRAINAGE OF PANCREATIC FLUID COLLECTIONS

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10.1136/gutjnl-2021-BSG.24

Introduction and Aims Endoscopic ultrasound guided transmural drainage (ETD) followed by endoscopic transluminal necrosectomy (ETN) is the evidence based preferred modality of treatment for symptomatic pancreatic fluid collections (PFC). EUS guided insertion of a lumen apposing metal stent (LAMS) facilitates improved drainage of fluid and improves efficacy of ETN. There is recognised risk associated with the procedure, primarily including bleeding, stent displacement and buried stent. Recent ESGE guidelines on the management of acute necrotising pancreatitis describe the use of imaging prior to drainage and at a 4 week interval, primarily to quantify the solid component in the collection. No definitive imaging protocols are established. In our institution, a protocol was developed to reduce the risk of adverse events associated with drainage. This included pre-intervention arterial phase CT and if identified, prophylactic embolisation of underlying pseudoaneurysm. In addition, all patients underwent CT at 4-5 weeks post stent insertion to determine efficacy of drainage and quantify residual component to determine benefit of long term plastic stents. We sought to assess the impact of the protocol on reducing LAMS associated adverse events.

Methods We evaluated our practice over a two year period between November 2018 and 2020. Prospectively collected data was reviewed retrospectively for the rates of technical success, clinical success and adverse event.

Results A total of 56 ETD procedures were performed on 52 patients. The majority of patients in the cohort were male (70.6%) with a mean age of 58 years. All patients underwent an arterial phase CT prior to ETD. Nine patients (17.3%) required embolisation of a previously unrecognised pseudoaneurysm prior to ETD. All procedures were technically successful (100%). Thirty five (67.3%) patients underwent a single ETN and 10 (19.2%) had multiple ETN procedures. Twenty two (62.8%) patients had a 20mm lumen diameter stent inserted and the remainder 15mm. Forty eight patients (92%) achieved complete resolution of collection with a single stent. Four patients (8%) required either an additional stent (multi-gated approach) or additional percutaneous drain. Stent dislodgement occurred in 4 (7.6%) patients during ETN. The