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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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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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