Conclusion Distinctive FI symptomatology and sensorimotor pathophysiology profiles has been identified in young and older adults. YA have higher prevalence of UFI symptoms owing to EAS dysfunction. MAA and OA showed higher prevalence in PFI symptoms through combination of diminished sensory of the rectal reservoir filling, reduced anal tone to prevent rectal outflow of faecal matter and blunted anal sensory making them susceptible to faecal seepage.

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PWE-085 THE CLINICAL VALUE OF PERFORMING COUGH ASSESSMENT IN PATIENTS WITH FAECAL INCONTINENCE DURING ANAL MANOMETRY

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10.1136/gutjnl-2019-BSGAbstracts.405

Introduction The external anal sphincter (EAS) involuntary contraction invoked by cough mechanism is usually abandoned during anal manometry studies because its clinical value remains unknown. In this study, we retrospectively review the EAS contractions invoked by cough in patients undergone biofeedback therapy (BFT) for faecal incontinence.

Method Patients were selected between October 2010 and October 2013. Each patient had:

Anal manometry test performed by an experienced gastrointestinal physiologist

Attended at least two biofeedback therapy (BFT) sessions

Patients with constipation symptoms leading to overflow incontinence, flatus/mucus incontinence without faeces or having a rectal prolapse protruding externally via anus on visual inspection were excluded.

Anal manometry was performed using 8-channel water-perfused radial catheter in accordance to [1]. Anal tone and EAS contractions (induced by voluntary manoeuvre and involuntary via cough mechanism) were performed twice at the high pressure zone of the anal canal and the highest contraction amplitude were recorded. These physiological parameters were benchmarked against normal range [2]. Statistical χ^2 , t-test, odd ratio (OR) and positive predictive value (PPV) were employed.

Results Patient gender female: male demography was 97:18 (aged between 2–0 years). None of the patients showed or experienced faecal incontinence episodes during the cough manoeuvre.

In this cohort of patients, 29.5% demonstrated normal voluntary EAS contraction and 68.7% demonstrated a normal EAS involuntary contraction ($p < 0.0001$). This suggests the two EAS function assessment are different and the voluntary EAS contraction did not represent the full potential of the EAS contraction.

Patients who responded to BFT showed significantly increased EAS involuntary contraction (77.4cmH₂O vs 43.7cmH₂O, $p < 0.00001$). Sensitivity to responding BFT when normal involuntary EAS contraction was observed is 72% and specificity to not responding to BFT when involuntary EAS contraction amplitude was hypotensive is 53.3% ($p = 0.0242$). When a normal EAS involuntary contraction is demonstrated

during manometry, the odds of patients responding to BFT nearly triples and good prediction to responding to BFT was observed (OR=2.96, PPV=91.1%).

Conclusion This study shows the clinical value of performing EAS involuntary contraction invoked by cough as a diagnostic parameter that differs from the voluntary EAS assessment. EAS involuntary invoked by cough may also be a clinical predictor for BFT outcome.

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PWE-086 SUBTYPES OF FAECAL INCONTINENCE

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10.1136/gutjnl-2019-BSGAbstracts.406

Introduction Urge faecal incontinence (UFI) and passive faecal incontinence (PFI) are forms of anal incontinences described by patients that are not treated differently nor received subtype classification for treatment. This study addresses the pathophysiology of faecal incontinence subtypes.

Method Patients were selected based on UFI and PFI symptoms who also underwent various anorectal physiology studies according to protocols [1]. They were performed by an experienced clinical gastrointestinal physiologist.

All patients had normal endo-anal ultrasound screening and the rectum criteria includes patients with incontinences of mixed subtypes, mucus and flatus incontinence without stools, constipation with overflow incontinence and rectal prolapse detected protruding externally from the anus on visual inspection.

Appropriate χ^2 and t-test were employed to assess the patient demography and anorectal physiology profiles.

Results Total number of patients selected is 304: UFI group (F:M=181:35, aged 2–6years) and PFI group (F:M=66:22, aged 2–1 years).

Patients with PFI are generally older ($p < 0.00001$) and men are more likely to complain of PFI than UFI (25% vs 16.2%, $p = 0.0374$).

Patients with UFI symptoms tend to open their bowels more frequently compared to patients with PFI symptoms (4.0 vs 2.8, $p = 0.0005$). Their stool consistency to bowel opening (including UFI episodes) are generally formed (Bristol Stool Chart [BSC] types –) and patients with PFI generally pass stools (including incontinent) that are loose/liquid motion (BSC types –) ($p < 0.00001$).

There was no statistical difference in the functional anal length calculated from the manometric pull through ($p = 0.2610$).

In patients with PFI symptoms, significantly reduced anal resting pressure was observed ($p = 0.0001$) and higher incidence of hypotensive anal tone was observed (65% vs 42%, $p = 0.0002$).

Patients with UFI symptoms, demonstrated significantly lower voluntary peak pressure ($p = 0.002$), involuntary cough contraction ($p = 0.011$) and endurance squeeze pressures ($p = 0.015$). Respectively, their hypotensive prevalence were significantly higher: 43.1% vs 30% ($p = 0.0196$), 43% vs 31% ($p = 0.0383$) and 83.4% vs 71% ($p = 0.0088$).

The rectal sensory function to distension were generally normal in both subtypes of FI and there was no statistical