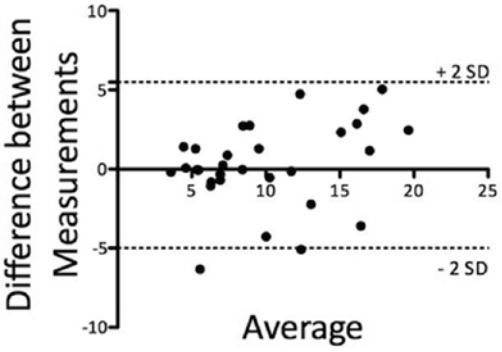
variability (HRV) albeit with considerable methodological limitations, particularly with respect to temporal resolution. However, recent advances have allowed the measurement of a novel non-invasive validated measure of efferent vagal activity from the brainstem, known as cardiac vagal tone (CVT). CVT is measured on a linear vagal scale (LVS) where 0 represents full atropinization and has improved temporal resolution compared to HRV. CVT is increasingly being utilised in a diverse array of GI research (3.4.5). However, its normal values and reproducibility are, to date, incompletely understood. The aim of this study was to address these knowledge gaps.

Methods 120 healthy subjects (68 males, median age 29 years, range 19–55 years) were studied in a temperature controlled, constantly lit, quiet laboratory. After attachment of CVT recording equipment (Neuroscope), 20 minutes of CVT data (resting/no stimulation) was acquired. 30 subjects, selected at random, were restudied after 1 year. Reproducibility was assessed using a two-way, random effects, single measure intra-class correlational coefficients (ICC) model and Bland Altman plots.

Results The mean CVT was 8.2 LVS with a standard deviation of 3.0. Thus, the normal range (mean +/- 2 standard deviations (SD)) for CVT based on this data is therefore 2.2 LVS to 14.2 LVS. Age correlated negatively with CVT ($r = -0.36$, $p < 0.0001$) but there was no discernable effect of gender, body mass index or ethnicity. The ICC for CVT was 0.81 (95% confidence interval 0.64–0.91), indicating excellent reproducibility. Figure 1 shows the Bland-Altman plot that demonstrate that 29 out of the 30 measurements lie within +/- 2 SDs of the differences between measurements suggesting that there was no bias or systematic error and that the parameter of CVT is reproducible at a period of 1 year.



Abstract PTU-121 Figure 1

Conclusion The normal range for CVT should be considered to be 2.2 – 14.2 LVS. CVT is a reproducible measure over the period of 1 year. Future research utilising CVT should refer to these values

Disclosure of Interest None Declared

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PTU-122 AUTONOMIC NERVOUS SYSTEM RECOVERY FOLLOWING OESOPHAGEAL INTUBATION IS INFLUENCED BY PERSONALITY TRAITS & ANXIETY

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Introduction Oesophageal intubation activates a complex stress response, mediated in part by the autonomic nervous system (ANS) (1). Measurement of ANS tone at intubation is thus a useful method of assessing the duration of the physiological stress response which may influence any subsequent measurement of oesophageal sensory-motor function. For instance, it is known that both ANS tone and psychological factors such as the personality trait of neuroticism and anxiety levels, influence oesophageal sensitivity to distension (1). However, factors that influence recovery of ANS tone following intubation are incompletely understood. Thus the aim of the study was to evaluate the ANS response to oesophageal intubation and to identify whether personality traits influence its recovery to baseline.

Methods 50 healthy subjects (25 male, mean age 38.1 years, range 21–59 years) had personality traits, using the validated Big-Five Inventory (BFI), and anxiety levels, using the validated Spielberger State/Trait Anxiety Inventory (STAI). ANS tone was assessed using cardiac vagal tone (CVT) which is a validated measure of brainstem mediated parasympathetic (PNS) efferent tone at baseline (10 minutes) & continuously thereafter in addition to heart rate (HR) and mean arterial blood pressure (MBP) which are mixed measures of PNS and sympathetic tone. Subjects were then intubated with a naso-oesophageal catheter, without the aid of local anaesthetic, and monitored for a further 20 minutes.

Results All subjects tolerated the study well. The mean BFI neuroticism score (BFI-N) was 2.86 (range 1–5). The mean baseline HR, MBP and CVT was 65 beats per minute (range 48–88), 87 mmHg (range 68–104) and 7.8 (range 2.2–14.1) respectively. As expected, naso-esophageal intubation caused a significant elevation in HR ($p < 0.0001$) and MBP ($p < 0.0001$) with associated CVT withdrawal ($p = 0.001$). The mean recovery time of CVT to baseline was 4.5 minutes (range 1.1 – 14.9). BFI-N, state STAI and trait STAI were positively correlated with recovery time ($r = 0.86$, $p < 0.0001$; $r = 0.48$, $p < 0.0001$; $r = 0.58$, $p < 0.0001$).

Conclusion Naso-oesophageal intubation results in the withdrawal of PNS tone and an increase in HR and MBP and the speed of recovery to baseline of PNS tone is correlated with neuroticism. Future studies should allow for at least 15 minutes of recovery time after intubation before any physiological assessments are made and consideration should be given to psychological trait measures as these can influence the recovery of stress response to intubation.

Disclosure of Interest None Declared

REFERENCE

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PTU-123 FACTORS THAT ANTICIPATE CLINICAL/THERAPEUTIC OUTCOMES TO PRUCALOPRIDE

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Introduction Chronic constipation (CC) is a prevalent disorder that has a significant negative impact on quality of life. Traditional management has focused on lifestyle measures and laxative. Prucalopride, a selective high affinity 5-HT_4 receptor agonist, has been demonstrated to an effective treatment of severe CC. However, its efficacy in secondary care and factors that predict clinical response are incompletely understood. Our aim was thus to identify baseline factors that may predict positive clinical outcomes in patients taking prucalopride for CC.

Methods A single centre, prospective open label trial was undertaken in patients with primary and secondary CC, defined as less than 2 spontaneous complete bowel movements (SCBM) per week, who were commenced on prucalopride. Validated questionnaires

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