PTH-27 RISK-STRATIFIED FIT FOR URGENT COLONOSCOPY IN LYNCH SYNDROME: A CLINICAL SERVICE THROUGHOUT THE COVID-19 PANDEMIC

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Introduction Lynch syndrome (LS) is an autosomal dominant inherited disorder characterised by pathogenic variants within the mismatch repair (MMR) genes, *MLH1*, *MSH2*, *MSH6*, *PMS2*, and a variant in *EPCAM*, which regulates *MSH2* expression and results in an increased risk of several cancers, particularly colorectal cancer with an annual incidence rate of 3-5%. The faecal immunochemical test (FIT) is currently used in non-LS symptomatic and screening populations to guide subsequent colonoscopy. We report preliminary results from an NHS England endorsed clinical service implemented during the COVID-19 pandemic (June-December 2020) which used FIT to prioritise colonoscopy in the highest risk LS patients in response to limited colonoscopy capacity throughout the pandemic.

Methods Regional genetic and endoscopy services across England were invited to participate, with the support of the British Society of Gastroenterology (BSG). Patient eligibility was determined by 1) Diagnosis of Lynch Syndrome 2) Planned colonoscopic surveillance between 1 March 2020 and 31 December 2020. Requests for FIT testing from participating NHS Trusts were sent to the NHS Bowel Cancer Screening South of England Hub in Guildford. The Hub sent patients a FIT kit (OC-Sensor™ (Eiken, Japan)), instructions for use, a questionnaire, and a pre-paid return envelope. Laboratory reports with faecal haemoglobin (f-Hb) results were returned electronically for clinical action. LS patients were risk-stratified for colonoscopy based upon the following f-Hb thresholds: (1) f-Hb $\geq 10\mu\text{g Hb/g faeces}$: triaged for colonoscopy via the two-week wait (2WW) pathway, (2) f-Hb $\leq 10\mu\text{g Hb/g faeces}$: schedule patients for colonoscopy within 6-12 weeks, where local endoscopy service availability permits.

Results Fourteen centres across England participated in the clinical service evaluation from 9th June 2020 to 1st December 2020. An uptake rate of 63% was observed from this cohort (269/428 invites). Of the 269 patients who returned their FIT devices, 20% (n=55) had f-Hb $\geq 10\mu\text{g Hb/g faeces}$ and met criteria for urgent colonoscopy triage via the 2WW pathway. 29% (n=77) of patients had a f-Hb that was greater than the limit of detection of the assay ($6\mu\text{g Hb/g faeces}$) yet below $10\mu\text{g Hb/g faeces}$. 22 patients (8%) had f-Hb between 6 and $9.9\mu\text{g Hb/g faeces}$. In a subgroup analysis of 67 patients from St Mark's Hospital, the adenoma detection rate was 42.4%, and 9/67 proceeded to priority colonoscopy based on their FIT findings.

Conclusions Implementation of this clinical service during the COVID-19 pandemic has demonstrated clinical value for LS patients requiring routine surveillance. Further investigation on the efficacy of this novel intervention is warranted, namely as it pertains to additional data analysis to include endoscopy findings for participating LS patients to discern FIT sensitivity and specificity, which will be further explored under the auspices of a multi-centre prospective research study which is presently in development.

PTH-28 ELEMENTAL FORMULA AND LOFFLEX NUTRITION THERAPY; AN EFFECTIVE BUT NEGLECTED TREATMENT STRATEGY IN CROHN'S DISEASE

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Introduction Nutrition therapy in treatment of Chron's Disease (CD) is not adequately highlighted in adult guidelines despite strong evidence supporting its therapeutic efficacy and thus, this option is often not offered to Crohn's patients during gastroenterology consultations. In this retrospective study, we aim to evaluate the effectiveness of nutrition therapy using exclusive Elemental Formula for 2 weeks followed by a transition to Low Fat/Fiber Limited Exclusion (LOFFLEX) diet for at least 3-4 weeks in treating adults with active CD.

Methods 38 patients with active CD were recruited from Palmerston North Hospital. Only 28 fulfilled the inclusion criteria. Participants were treated with exclusive Elemental formula for 2 weeks with a transition to a LOFFLEX diet for 3-4 weeks and finally reintroduction to normal diet.

The primary outcomes measured were disease activity defined by the Harvey Bradshaw Index (HBI), prevalence of diarrhoea, abdominal pain, blood in stools, general well-being and changes in inflammatory markers of C-reactive protein (CRP) and white blood cell count (WBC). Statistical analyses were performed using SAS (SAS/STAT version 9.4; SAS Institute Inc., Cary, NC, USA).

Results Following exclusive Elemental formula and/or LOFFLEX nutrition therapy, full clinical remission was achieved in 22 patients. This was reflected by substantial improvements in disease activity and inflammatory markers across all patients at the end of the study. Mean HBI score fell from 7.85 ± 0.63 at baseline to 3.42 ± 1.19 (a 56.4% improvement; $P < 0.001$). Frequency of diarrhea and abdominal pain was halved from 0.81 ± 0.08 to 0.27 ± 0.17 ($P < 0.01$) and 0.35 ± 0.18 ($P < 0.05$) respectively. Frequency of blood in stools decreased by 13% ($P < 0.05$) and CRP levels improved by 67.8% ($P < 0.05$) from baseline.

Conclusion Nutrition therapy with exclusive Elemental formula followed by LOFFLEX diet was highly successful and effective in inducing full clinical remission in 78.5% of cases and the

Abstract PTH-28 Table 1 Effect of nutrition therapy with Elemental formula and LOFFLEX diet on disease activity, symptom prevalence and inflammatory markers (Mean $\pm$ SEM)

Parameters	Start	End
Harvey Bradshaw Index	7.85 $\pm$ 0.63	3.42 $\pm$ 1.19***
Diarrhoea Prevalence	0.81 $\pm$ 0.08	0.27 $\pm$ 0.17**
Abdominal Pain Prevalence	0.81 $\pm$ 0.08	0.35 $\pm$ 0.18*
Blood in stools Prevalence	0.49 $\pm$ 0.09	0.14 $\pm$ 0.09*
CRP	1.99 $\pm$ 0.26	0.64 $\pm$ 0.51*
WBC	8.84 $\pm$ 0.58	8.37 $\pm$ 0.91

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$ differ from the normal diet

Correction: *PTH-27 Risk-stratified FIT for urgent colonoscopy in Lynch Syndrome: A clinical service throughout the COVID-19 pandemic*

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