Very Early Onset Inflammatory Bowel Disease

Introduction

Very early onset inflammatory bowel disease (VEO-IBD) affects the gut but also other tissues and as a consequence of persistent inflammation and treatment side effects the function of organs such as the liver may be impeded. Children are often not able to tolerate food and frequently rely on parenteral nutrition. Data is sparse but suggests that patients presenting in the first two years of life generally have a very poor prognosis with high mortality and morbidity (1). VEO-IBD (children with disease-onset before 6 years of age) has an estimated incidence of 4.37/100,000 and a prevalence of 14/100,000. Recent discoveries and published reviews (2) suggest that many monogenic diseases can present with an IBD-like phenotype (monogenic IBD).


Referrals

Referrals are accepted from Consultant Clinical Geneticists and Consultant Paediatric Gastroenterologists with presentation:

- Patients aged under 6 years of age at onset with bloody diarrhoea & severe failure to thrive
- Severe intestinal inflammation (macro- and microscopic) on upper and/or lower endoscopy
- Histology consistent with chronic inflammatory intestinal pathology

All referrals must be accompanied by a completed proforma (www.labs.gosh.nhs.uk/media/528431/VEO-IBD Panel Proforma.doc)

For clinical enquiries, please contact Dr Neil Shah, Gastroenterology, GOSH Tel: +44 (0) 20 7405 9200 ext 5949, email: Neil.Shah@gosh.nhs.uk

Prenatal testing

Prenatal testing is available for families in whom specific mutations have been identified or in whom appropriate family studies have been undertaken - please contact the laboratory to discuss.

Service offered

Analysis of coding regions and intron/exon boundaries of 40 genes (see list below); variant confirmation and familial tests by Sanger sequencing.

ADA, ADAM17, AICDA, BTK, CD3y, CD40LG, CYBA, CYBB, DCLRE1C, DOCK8, EPCAM, FOXP3, GUCY2C, HPS1, HPS4, HPS6, ICOS, IKBKG, IL2RG, IL10, IL10RA, IL10RB, ITGFB2, LIG4, LRBA, NCF1, NCF2, NCF4, PIK3R1, PLCG2, RAG2, RET, SH2D1A, SIKIV2L, SLC37A4, STXB2, TTC37, WAS, XIAP, ZAP70

Technical

Mutation screening is carried out by next generation sequencing with library preparation using a Sure Select XT custom kit followed by sequencing on the Illumina MiSeq. Data is analysed using an in-house pipeline with all mutations confirmed by Sanger sequencing.

Target reporting time

4 months for a full mutation screen in an index case (next generation sequencing). 2 weeks for familial mutation testing. Please contact the laboratory for urgent cases.