Raised fecal calprotectin

HOSP #		WARD	GIT clinic
CONSULTANT	Dr. Heleen Vreede	DOB/AGE	59 y male

Abnormal Result

Faecal calprotectin >6000 ug/g stool

Presenting Complaint

59 y male, presenting with diarrhoea and bloody mucus per rectum

History

This is a 59 year old male known with ulcerative colitis proctitis who now has a suspected flare.

Ulcerative colitis (pancolitis) diagnosed 2009.

Histological history

2017: Mild focal active colitis noted on Histology

2019: Sections of rectal mucosa showed features of active chronic proctitis. The crypts showed distortion with focal areas of crypt abscesses noted. The lamina propria was expanded by reactive polymorphous mature lymphocytes with conspicuous eosinophils.

Examination

Unknown

One would look for especially extra-intestinal manifestations

of Ulcerative Colitis

Laboratory Investigations

Histology: Sections of colon demonstrate a severe acute colitis with cryptitis , crypt abscess and numerous neutrophils in the lamina propria on a background of chronic changes illustrated by architectural disarray and glandular atrophy.

Other Investigations

Apart from the colonoscopy and histology, one needs to evaluate for other autoimmune disorders in the gastro-intestinal tract, especially complications of primary sclerosing cholangitis. No biochemical signs thereof was present.

Test (units)	Result
Creat (umol/L)	122 H
MDRD	53
CKD-EPI	56
Alb (g/L)	44
Total bili (umol/L)	4 L
Conj bili (umol/L)	2
ALT (U/L)	18
AST (U/L)	30
ALP (U/L)	77
GGT (U/L)	16
CRP (U/L)	2

Final Diagnosis

Inflammatory Bowel Disease (Ulcerative colitis)

Take Home Message

We have in recent years started to offer this test. One of our recently qualified pathologists, Dr. Justine Cole, was responsible for the method validation of this assay at our laboratory. There were quite a few difficulties with the validation, mainly due to stool being a difficult to work with matrix and sample stability when transported.

In summary:

Faecal calprotectin is excreted in excess into the intestinal lumen during the inflammatory process and so can act as a marker for inflammatory diseases of the lower gastrointestinal tract. Faecal calprotectin testing is recommended in patients with recent onset lower gastrointestinal symptoms, if cancer is NOT suspected, for the
differential diagnosis of inflammatory bowel disease (IBD e.g., Chrohn’s disease, ulcerative colitis) or irritable bowel syndrome (IBS).

Faecal calprotectin <=50 ug/g stool is negative, i.e., supports IBS.

Faecal calprotectin >50 ug/g stool is positive, i.e., supports IBD.