The prevalence of anaemia in inflammatory bowel disease in relation to disease activity, as stratified by faecal calprotectin

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Background: The prevalence of anaemia in IBD varies significantly between published studies, ranging from 6–74%. However, underlying disease activity, a potential explanation for this variability, has not been accurately correlated with the frequency of anaemia to date. Faecal calprotectin (FC) is a surrogate marker of underlying mucosal inflammation. The objective of this study was to investigate the prevalence of anaemia and its correlation with disease activity in IBD, in a large cohort of patients with matched full blood count (FBC) and FC data.

Methods: Patients with confirmed IBD from the Edinburgh faecal calprotectin registry (EFCR) were identified. Where multiple FCS were available, the most recent result was taken as reference. Blood test results were obtained from the electronic record covering a period one month either side of the FC. The WHO criteria, as adopted by ECCO, was used to define anaemia (Hb <130 g/L in men, <120 g/L in women). A FC value of >200 µg/g was used to indicate active disease. The cohort was subdivided into 4 groups: active and inactive CD, active and inactive UC.

Results: 1226 patients (771 CD, F = 65%, 455 UC, F = 35%) with matched FC and FBC data were analysed. The median age was 44y (IQR 31–57), median disease duration 120 months (IQR 31–207). Overall, 314/1226 patients (25.6%) were anaemic, 185/314 (58.9%) of which were female. Anaemia was observed more frequently in patients with active as opposed to inactive CD (110/328 [33.5%] vs 65/443 [14.7%], p <0.0001). This pattern was also seen in patients with UC (129/293 [44%] vs 23/162 [14.2%], p <0.0001). The prevalence of anaemia in active UC was greater than in active CD (p = 0.014); however, this could be explained by the higher median FC in the UC cohort (900 vs. 618, p <0.0001). There was no statistically significant difference in age or Montreal location (L1+L3 vs L2, p = 0.16) between the groups. ROC analysis of FC as a predictor of anaemia showed an AUC of 0.69 with a sensitivity and specificity of 0.73 and 0.57 respectively at a cut off of 200 µg/g.

Conclusions: In this cohort over 25% of patients with IBD were anaemic. There is a clear correlation between disease activity and anaemia in both CD and UC but this is unrelated to disease distribution in CD. Anaemia in asymptomatic patients should alert clinicians to the possibility of subclinical active mucosal inflammation. These data and the ROC analysis provide further support for optimising disease treatment in IBD targeting a FC level of <200 µg/g.

Effectiveness of leukocyte adsorber LA25 in the treatment of inflammatory bowel disease (IBD) patients non-responder to conventional therapy: pilot study LEUKOSMART

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Background: Granulocyte/monocyte apheresis (GMA) is an extracorporeal procedure that selectively removes leukocytes (WBC) from peripheral blood with reduction of inflammatory process. Some GMA devices have been demonstrated safety and effectiveness in refractory or intolerant to conventional therapy IBD patients (pts). This open-label and prospective study assesses the performance, clinical efficacy and safety of GMA with leukocyte adsorber LA25 (Medica Spa., Medolla, Italy) in Crohn’s disease (CD) or Ulcerative colitis (UC) non-responder to conventional therapy (steroids, thiopurine and anti-TNFa) pts. Primary outcome are the performance (reduction of WBC, neutrophils and monocytes in peripheral blood) and clinical efficacy (decrease of 30% of diseases activity indexes: CDAI – Crohn’s Disease Activity Index and MAYO) evaluation of LA25 respect to baseline.

Methods:Pts with a diagnosis of active moderate-severe IBD, according to MAYO (for UC pts) and to CDAI (for CD pts) scores were evaluated. The protocol required 5 weekly GMAs for each pt. LA25 was constituted by Medisulfone® (hydrophilic polysulfone) fibers. Blood samples were collected at the baseline, before, during and after completion of each GMA. The analysis of LA25 performance was corrected for the dilution factor. Study was approved by local IEC.

Results: From September 2011 to September 2012, 17 pts (10 UC, 7 CD) were enrolled. Two pts were withdrawn (one reactivation of autoimmune chronic hepatitis and one HZV exacerbation). Mean MAYO score at baseline was 9.40±1.40 (6 pts with MAYO more than 10 and 4 pts <MAYO <9). Mean CDAI was 213.14±31.99 (5 pts 150 < CDAI <219 and 2 pts 220 < CDAI <450). Red blood cells, haemoglobin, haematocrit and lymphocytes were not significantly influenced by LA25 during GMA (10–20%): WBC, neutrophils, monocytes and platelets (PLTs) were selectively removed (45–55%, 50–65%, 75–80% and 40–50%). All pts achieved clinical remission with a significant (p <0.005) decrease in MAYO and CDAI score at 10 and 18 weeks of follow up (MAYO: score: 5.63±2.56 and 4.75±1.16; CDAI score: 63.50±22.67 and 78.00±31.66). Treatment period is completed. Follow up phase still on going.

Conclusions: LA25 demonstrated a selective and significant reduction of WBC during GMA. Preliminary data show that pts who completed the study achieved clinical remission with significant reduction in MAYO and CDAI scores (more than 30%). No one developed side effects.
Conclusions: IBD sufferers commonly experience symptoms of anxiety and depression and they may have an impact on patient clinical outcomes. Regular screening for these co-morbidities is essential for good management. CBT shows promise in helping with somatic symptoms of IBD. More studies are needed on antidepressants specifically in IBD but they are overall well tolerated by patients and can be prescribed as per other populations.

P321 Vitamin D level doesn’t correlate with disease extent and severity in Hungarian patients with inflammatory bowel disease
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Background: Recent studies have shown that vitamin D has an important role in the immune regulation. Vitamin D is essential for innate and adaptive immune system, it plays an important role in the formation of immune tolerance, as well. Vitamin D deficiency has been observed in several western IBD (inflammatory bowel diseases) populations, but there is no data available about IBD patients from Eastern Europe.

Methods: We included 161 IBD patients (46 with UC (Ulcerative Colitis), 115 with CD (Crohn’s disease); female/male: 82/79) into the study. Mean age of the patients 35.9 ± 11.7 years. Disease extent of UC and CD was defined based on the Montreal Classification (E1–3 and L1–3, respectively). Vitamin D insufficiency was defined as a level below 15 and 30 ng/ml, deficiency was defined as a level under 15 ng/ml. Calculations were performed using SPSS statistics 15.0 software. Paired and independent sample Student’s t-tests, Pearson correlations were applied.

Results: Fifty-two percent of IBD patients had vitamin D insufficiency (CD: 53%, UC: 48%), 28% of them (CD: 25%, UC: 33%) had severe vitamin D deficiency. Only 20% of the IBD patients (CD: 22%, UC: 19%) had adequate vitamin D level (≥30 ng/ml). The median vitamin D level was 22.74 ± 10.61 ng/ml. Vitamin D levels did not differ regarding the type of the IBD (23.65 ± 11.19 ng/ml vs. 19.89 ± 7.66 in CD vs. UC; NS). There were no significant difference in vitamin D levels considering disease extent (CD-L1: 23.94 ± 7.99 ng/ml, CD-L2: 23.79 ± 8.62 ng/ml, CD-L3: 22.23 ± 12.67 ng/ml; NS and UC-E1: 19.27 ± 6.68 ng/ml, UC-E2: 19.60 ± 6.54 ng/ml, UC-E3: 18.93 ± 8.49 ng/ml; NS). Vitamin D concentration did not correlated neither to clinical activity indexes (partial Mayo score: r = −0.143; Crohn’s disease activity index: r = −0.253) nor inflammatory parameters (C-reactive protein: r = 0.008; erythrocyte sedimentation rate: r = 0.012).

Conclusions: Vitamin D deficiency is common in Hungarian patients with IBD. In contrast with results of previously performed studies, our results show that Vitamin D concentration is independent from disease extent or severity in IBD patients. However, methodological differences of Vitamin D determination, seasonal variation of blood sample taking and other important factors need to be considered while evaluating the different results.