864 Close Monitoring of CRP and Fecal Calprotectin is Able to Predict Clinical Relapse in Patients With Crohn's Disease in Remission After Infliximab Withdrawal. a Sub-Analysis of the Stori Study

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INTRODUCTION: In Crohn's disease (CD), predicting clinical relapse in patients in clinical remission by using non-invasive biomarkers could allow early therapeutic intervention. Serum C-reactive protein (CRP) and fecal calprotectin (calpro) have great potential in this regard.

AIM: To assess the value of monitoring CRP and calpro levels to predict a relapse in patients with CD in clinical remission after infliximab (IFX) discontinuation.

MATERIALS AND METHODS: Patients with luminal CD treated for at least one year with scheduled IFX combined with an immunosuppressant (IS) and in stable remission without steroids for at least 6 months were prospectively recruited in the STORI study (1). IFX was discontinued at baseline and IS treatment was kept at a stable dose over the study period. CRP and calpro were measured every 2 months until 18 months of follow-up or until clinical relapse. CRP and calpro levels were compared between relapsers and non-relapsers at each time point using a linear mixed model. The optimal threshold of each biomarker to predict clinical relapse was determined using ROC curve analysis.

RESULTS: 113 patients were included and analyzed. Among them, 51 presented a relapse after a median follow-up of 10 months. Overall 475 CRP and 454 calpro measurements were performed in relapsers and nonrelapsers with a median of 4 measurements/patient for each marker. Median [IQR] CRP at inclusion was 2 mg/l [0.9;4.9] and median calpro was 51 µg/g [30;224]. The evolution of CRP and calpro levels was significantly different between relapsers and non-relapsers (p<0.0001 and p<0.001). In non-relapsers, a slight but significant increase in CRP and calpro levels was observed throughout the follow-up (p=0.0018 and p=0.0016 respectively) with a median value at maximal follow-up of 3.7 mg/l for CRP and 66.9 µg/g for calpro. In relapsers, after a slight and progressive increase, a sudden and more pronounced increase in CRP and calpro levels was observed during the 4 months preceding clinical relapse (p<0.0001 and p=0.0004 respectively) with a median value before the relapse of 8 mg/l for CRP and 534 µg/g for calpro. Using ROC curve, the best compromise between sensitivity and specificity to predict relapse was 6.1 mg/l for CRP (sensitivity 71%, specificity 66%) and 305 µg/g for calpro (sensitivity 70%, specificity 74%).

CONCLUSION: After discontinuation of IFX in patients with CD in clinical remission, a sudden increase in CRP and calpro levels predicts the occurrence of a relapse during the next 4 months. Further studies are needed to evaluate the therapeutic implications of these findings.

REFERENCES: 1. E Louis, GETAID et al. Gastroenterology 2011, Sept 22 epub.