

**Methods:** We conducted a retrospective study including patients admitted in our department for severe acute colitis of inflammatory bowel disease (IBD) between 2000 and 2012. Diagnosis of severe acute colitis was made on the basis of Truelove and Witts criteria. Response to cyclosporine therapy was assessed clinically and biologically after 3 and 7 days of treatment and was defined as a Lichtiger score less than 10/20. Statistical analysis was performed with SPSS software version 21.0.

**Results:** One hundred and sixteen patients were referred for severe acute colitis. Cyclosporine was administered in 40 patients after failure of intravenous steroid therapy. There were 18 males and 22 females with a mean age of 31.4 years old (17–55). There were 12 Crohn's disease cases and 28 of ulcerative colitis cases. Response to cyclosporine was obtained in 20 patients (50%). In univariate analysis, presence of mucosal bridges during initial colonoscopy ( $p=0.033$ ), absence of anterior maintenance therapy ( $p=0.021$ ) and a decrease of platelet count  $>65,000/\text{mm}^3$  after 7 days of treatment ( $p=0.013$ ) were associated to response to cyclosporine. In multivariate analysis, presence of mucosal bridges during initial colonoscopy was independently associated with response to cyclosporine ( $p=0.0001$ ).

**Conclusions:** Cyclosporine is effective in preventing surgery in patients with severe steroid resistant colitis. Response rate of 50% encourages selecting candidates to this treatment with similar benefit in case of Crohn's disease or ulcerative colitis.

#### P541

##### Can we predict myelotoxicity development during thiopurine therapy for inflammatory bowel disease?

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**Background:** Myelotoxicity occurs in 2–25% patients as side effect during treatment with azathioprine (AZA) and 6-mercaptopurine (6MP).

Aim of study was to determinate frequency of the G238C, A719G, and G460A TPMT gene polymorphisms and to measure the TPMT enzyme activity in red blood cells in Russian inflammatory bowel disease (IBD) patients with myelotoxicity during AZA/6MP treatment.

**Methods:** 27 IBD patients with myelotoxicity during AZA/6MP treatment were included (male:female – 0.9, average age – 37.3 years). AZA/6MP dose and treatment duration before development of myelotoxicity were assessed. Average therapeutic dose of thiopurines was 2.37 mg/kg/d (range 2.0–2.5 mg/kg/d). Myelotoxicity was defined as white blood cells levels  $<4.0 \times 10^9/\text{L}$  (Russian laboratory value norms) and/or platelet count  $<180 \times 10^9/\text{L}$ . Measuring of TPMT activity in red blood cells was performed in all patients using TPMT ELISA Kit (Biomerica, Inc.). Based on the manufacturer's instruction very low enzyme activity was determined as  $<7$  U, moderate as 7–17 U, normal as  $>17$  U. Genotyping for TPMT gene polymorphisms (G238C, A719G, and G460A) were performed by polymerase chain reaction and, separately, using DNA-microchip in 21 patients.

**Results:** 17/27 patients (63%) had isolated leukopenia, 1 (4.7%) had thrombocytopenia, in 9 cases (33.3%) a combination of leukopenia and thrombocytopenia was shown. 14/27 patients with myelosuppression (51.9%) showed a decreased TPMT enzyme activity, the mean enzyme level was  $13.57 \pm 0.64$  U. Other patients had normal TPMT activity ( $21.02 \pm 1.61$  U). In patients with pancytopenia average TPMT activity level was lower compared to patients with leukopenia and

thrombocytopenia alone:  $14.61 \pm 0.91$  vs  $19.28 \pm 1.66$  ( $p=0.02$ ). There was no correlation found between the enzyme activity and the degree of leuko- and thrombocytopenia. Thus, patients with reduced activity of TPMT had a mean value of white blood cells equal to  $2.96 \pm 0.17 \times 10^9/\text{L}$ , patients with normal enzyme activity had  $2.75 \pm 0.1 \times 10^9/\text{L}$  ( $p > 0.05$ ). Using the world recommendations in definition of leukopenia ( $<3 \times 10^9/\text{L}$ ), we could not find differences in white blood cell levels depending on TPMT activity. Only one patient (4.8%) with IBD was heterozygous for TPMT\*3A (G460A and A719G). No TPMT\*2 (G238C), TPMT\*3B (G460A) or TPMT\*3C (A719G) alleles were detected. There was no association between genotypes and TPMT activity and time of development of myelotoxicity.

**Conclusions:** Neither TPMT genotype nor the TPMT activity not allow to predict development of myelotoxicity during AZA/6MP treatment in IBD patients. However low TPMT activity is associated with more severe myelosuppression. Patients receiving thiopurines need regular monitoring of the full blood count tests throughout the course of thiopurine therapy.

#### P542

##### Crohn's Disease (CD) in the elderly – an IG-IBD study

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**Background:** Epidemiology of IBD shows a second incidence peak in subjects over 60 years. Little is known about disease localization, behaviour, surgery rates, and therapy in CD patients diagnosed over age 65 years.

**Methods:** in this multicentre retrospective analysis demographic and disease-specific data were collected in 3 groups. Group 1: patients with diagnosis over age 65 years, group 2: patients matched for age, but with diagnosis before 65 years, and group 3: sex-matched patients diagnosed before 40 years.

**Results:** a total of 469 patients were included; group 1: 113 patients (48 M) diagnosed at age  $69.9 \pm 4.3$  years, group 2: