P192
Modification of the course of inflammatory bowel disease (IBD) during pregnancy and after delivery
A. Alcalde Vargas1 *, C. Trigo Salado1, E. Leo Carnerero1, M. De la Cruz Ramirez2, J.M. Herrera Justiniano1. 1Virgen del Rocio Hospital, Gastroenterology, Sevilla, Spain

Background: Pregnancy is a common event during follow-up that can interfere with the course of the disease. Objectives: To assess the course of the disease during pregnancy and after delivery. Modification of the course of IBD was defined as the need for corticosteroids, immunosuppressors (IS), biological agents or surgery due to disease activity or complications. To establish predictors of disease modification. To assess the incidence of miscarriage, malformations and perinatal morbimortality.

Methods: A retrospective study was made of women with IBD and pregnancy during the period 2007–2011.

Results: 99 patients, 39 with ulcerative colitis (UC) and 60 with Crohn’s disease (CD).

Modification of IBD during pregnancy occurred in 19.2% and was more frequent in UC (30.8%) than in CD (11.7%). During postpartum, disease modification was observed in 37.4% of the patients, with similar rates for UC (38.5%) and CD (36.7%). The univariate analysis showed a greater risk of reactivation during pregnancy in patients with UC (p = 0.01; OR: 3.4), independently of disease extent or activity at the start of pregnancy, and in patients with CD and prior surgery (p = 0.01, OR: 1.3). Presence of a disease flare-up during pregnancy proved to be a risk factor for UC (p = 0.01; OR: 5.7). No associated factors were identified in CD.

No significant differences were observed between patients who discontinued and those who continued treatment with IS and/or biological drugs in terms of the course of the disease during pregnancy (with reactivation rates of 9% and 8.3%, respectively) and after delivery (with reactivation rates of 36.4% and 41.7%, respectively).

In 7 patients pregnancy ended in spontaneous miscarriage. Miscarriage was significantly less common in patients with UC (p = 0.008; OR: 0.3). No cases of malformations or perinatal morbimortality were recorded.

Conclusions: IBD underwent changes during pregnancy and after delivery in 19.2% and 37.4% of the cases, respectively. These changes were more common in patients with UC. In CD, prior surgery was a risk factor for disease modification during pregnancy. In UC, disease modification during pregnancy was a strong risk factor for disease flare-up in the year following delivery. No differences were observed in the course of IBD between patients who discontinued medication and those who do not – this probably being conditioned by the small number of women who suspended therapy, and the good previous control of IBD. The miscarriage rate was 7%, and proved significantly lower in patients with UC.

P193
Mitochondrial enzymes activity of peripheral lymphocytes in children with IBD
S. Petrichuk1 *, L. Kuznetsova1, G. Semenova1, T. Izmailova1, O. Kurbatova1. 1Scientific Center of Children’s Health, Cytochemical laboratory, Moscow, Russian Federation

Background: It is known that IBD is accompanied with intoxication, nutrients, vitamins and mineral deficiency, which lead to inadequate metabolic and energetic supply of all cells and tissues Lymphocytes play an important role in the immune mediated inflammation. Theirs functional activities depends on the energetic metabolism activity. Mitochondrial enzymes activity (respiratory chain enzymes activity) reflects cell energetic process intensity. Investigation of the lymphocytes mitochondrial enzymes activity can be useful for inflammation intensity evaluation.

Methods: We studied 44 children with Crohn’s disease (CD) and 26 patients with ulcerative colitis (UC) at the age from 10 to 18 years, who received infliximab for a long period. We investigated lymphocytes mitochondrial enzymes – succinate dehydrogenase (SDH) and NADH dehydrogenase (NADH-D) – activity by quantitative citochemical method, based on the n-nitrotetrazolium violet ability to form insoluble formazan granules during enzymic reduction. We applied 2 modifications of this method – using flow cytometer Beckman Coulter FC500 (USA) and hardware and software complex Morphology (Videotest, Russia). Clinical effect of the therapy was assessed using pediatric Crohn’s disease activity index (PCDIA) and pediatric ulcerative colitis activity index (PUCAI).

Results: We found out that children with the high baseline lymphocytes mitochondrial enzymes activity had better curative activity of infliximab than children with low dehydrogenases activity. Lymphocytes main subsets size changes characterized with absolute and relative B-lymphocytes number decrease in 95% children with CD and 75% patients with UC. At the disease manifestation we observed SDG activation in all lymphocytes subsets, most expressed in cytolytic T-lymphocytes (CTL) and NK-cells (NK) (+36% and +35% from the norm). First remission was characterized with increased CTL SDG activity (+12% from the norm), SDG decreased activity in B-cells and T-helpers (−19% and −10% from the norm respectively). At relapses we registered less SDG activation in CTL and NK subsets (+23% and +30% from the norm), the remission at this case characterized with the SDG decreased activity in all subsets. We showed that long duration causes gradual lymphocytes mitochondrial dehydrogenases activity decrease.

Conclusions: Our results proved that the level of lymphocytes energetic processes depends on the disease stage and duration.

P194
Methylene Blue orally administered tablets (MB MMX®) is effective in detecting intraepithelial dysplasia in patients with long standing ulcerative colitis
S. Danesel1 *, G. Fiorino1, A. Repici2. 1IRCSS Humanitas, IBD Center, Rozzano, Italy, 2IRCSS Humanitas, Gastroenterology and Digestive Endoscopy, Rozzano, Italy

Background: Patients with UC have an increased risk of colonic dysplasia and colon cancer. Chromoendoscopy (CE) with methylene blue (MB) can increase dysplasia detection. A formulation of MB 25 mg orally administered tablets (MB MMX®) allows colonic mucosal staining and could facilitate CE. The PK characteristics of the tablets were: mean Cmax 1149.12 ng/mL, Tmax 16.0 hrs, and T1/2 15.08 h. 38.7% of the dose was escrited (52.8%). The CE was performed 30 min after MB MMX tablets (MB MMX®) 25 mg orally administered tablets (MB MMX®) was administered. The CE was performed 30 min after MB MMX® tablets (MB MMX®) orally administered tablets (MB MMX®) was administered. The CE was performed 30 min after MB MMX® tablets (MB MMX®) was administered.

Methods: We studied 44 children with Crohn’s disease (CD) and 26 patients with ulcerative colitis (UC) at the age from 10 to 18 years, who received infliximab for a long period. We investigated lymphocytes mitochondrial enzymes – succinate dehydrogenase (SDH) and NADH dehydrogenase (NADH-D) – activity by quantitative citochemical method, based on the n-nitrotetrazolium violet ability to form insoluble formazan granules during enzymic reduction. We applied 2 modifications of this method – using flow cytometer Beckman Coulter FC500 (USA) and hardware and software complex Morphology (Videotest, Russia). Clinical effect of the therapy was assessed using pediatric Crohn’s disease activity index (PCDIA) and pediatric ulcerative colitis activity index (PUCAI).

Results: We found out that children with the high baseline lymphocytes mitochondrial enzymes activity had better curative activity of infliximab than children with low dehydrogenases activity. Lymphocytes main subsets size changes characterized with absolute and relative B-lymphocytes number decrease in 95% children with CD and 75% patients with UC. At the disease manifestation we observed SDG activation in all lymphocytes subsets, most expressed in cytolytic T-lymphocytes (CTL) and NK-cells (NK) (+36% and +35% from the norm). First remission was characterized with increased CTL SDG activity (+12% from the norm), SDG decreased activity in B-cells and T-helpers (−19% and −10% from the norm respectively). At relapses we registered less SDG activation in CTL and NK subsets (+23% and +30% from the norm), the remission at this case characterized with the SDG decreased activity in all subsets. We showed that long duration causes gradual lymphocytes mitochondrial dehydrogenases activity decrease.

Conclusions: Our results proved that the level of lymphocytes energetic processes depends on the disease stage and duration.

P194
Methylene Blue orally administered tablets (MB MMX®) is effective in detecting intraepithelial dysplasia in patients with long standing ulcerative colitis
S. Danesel1 *, G. Fiorino1, A. Repici2. 1IRCSS Humanitas, IBD Center, Rozzano, Italy, 2IRCSS Humanitas, Gastroenterology and Digestive Endoscopy, Rozzano, Italy

Background: Patients with UC have an increased risk of colonic dysplasia and colon cancer. Chromoendoscopy (CE) with methylene blue (MB) can increase dysplasia detection. A formulation of MB 25 mg orally administered tablets (MB MMX®) allows colonic mucosal staining and could facilitate CE. The PK characteristics of the tablets were: mean Cmax 1149.12 ng/mL, Tmax 16.0 hrs, and T1/2 15.08 h. 38.7% of the dose was escrited (52.8%). The CE was performed 30 min after MB MMX tablets (MB MMX®) 25 mg orally administered tablets (MB MMX®) was administered. The CE was performed 30 min after MB MMX® tablets (MB MMX®) was administered. The CE was performed 30 min after MB MMX® tablets (MB MMX®) was administered.

Methods: We studied 44 children with Crohn’s disease (CD) and 26 patients with ulcerative colitis (UC) at the age from 10 to 18 years, who received infliximab for a long period. We investigated lymphocytes mitochondrial enzymes – succinate dehydrogenase (SDH) and NADH dehydrogenase (NADH-D) – activity by quantitative citochemical method, based on the n-nitrotetrazolium violet ability to form insoluble formazan granules during enzymic reduction. We applied 2 modifications of this method – using flow cytometer Beckman Coulter FC500 (USA) and hardware and software complex Morphology (Videotest, Russia). Clinical effect of the therapy was assessed using pediatric Crohn’s disease activity index (PCDIA) and pediatric ulcerative colitis activity index (PUCAI).

Results: We found out that children with the high baseline lymphocytes mitochondrial enzymes activity had better curative activity of infliximab than children with low dehydrogenases activity. Lymphocytes main subsets size changes characterized with absolute and relative B-lymphocytes number decrease in 95% children with CD and 75% patients with UC. At the disease manifestation we observed SDG activation in all lymphocytes subsets, most expressed in cytolytic T-lymphocytes (CTL) and NK-cells (NK) (+36% and +35% from the norm). First remission was characterized with increased CTL SDG activity (+12% from the norm), SDG decreased activity in B-cells and T-helpers (−19% and −10% from the norm respectively). At relapses we registered less SDG activation in CTL and NK subsets (+23% and +30% from the norm), the remission at this case characterized with the SDG decreased activity in all subsets. We showed that long duration causes gradual lymphocytes mitochondrial dehydrogenases activity decrease.

Conclusions: Our results proved that the level of lymphocytes energetic processes depends on the disease stage and duration.