Aim of the work

The aim of the work was to analyze patient's adherence (compliance) to the pharmacotherapy of inflammatory bowel disease in Czech Republic, as well as to analyze quantity and character of potential drug interactions in medications of the tested kohort. Our aims were :

1. to analyze adherence to pharmacotherapy of IBD:
o in the patients cohort followed up in the single IBD Unit (Gastroenterological Centre, the 4th Medical Department, Prague)
o in the patients cohort followed up in a few gastroenterological ambulancies in the Czech Republic
2. to analyze potential drug interactions in medications of IBD patients

Results

1. Adherence to pharmacotherapy of IBD in the patients cohort followed up in the single IBD Unit (Gastroenterological Centre of the 4th Medical department, Prague)
177 patients were enrolled in the study (84 male, 93 female, 117 CD, 60 UC). The patients evaluated their adherence to the pharmacological treatment in an interview. From 47 patients, treated by mesalazine, the urine sample for HPLC analysis of mesalazine was taken. The data was processed by descriptive statistics and factor analysis.
18.6 % of patients admitted they minimally once in the past voluntarily discontinuated their treatment, without their gastroenterologist's consent. A voluntary lowering of the prescribed doses was stated by 18 % of patients. 14.7 % of patients occasionally do not refill their medication in time. There were founded no statistically significant differences in adherence between genders, disease type, previous bowel surgery, marital status, smokers and non-smokers and other demographic variables. 38.4 % of patients admitted non-voluntary non-adherence (occasionally forgotten prescribed daily doses).
In the group of 47 patients with the urine sample taking, in 6 cases (12.7 %) mesalazine was undetectable by HPLC.
By means of factor analysis non-adherent patients were proved to have a higher activity of the disease. Adherence to the pharmacotherapy is also harmed by adverse
- 87 -
drug effects and seems to be strongly influenced by the patient's knowledge on disease and prescribed medicines.
2. Adherence to pharmacotherapy of IBD in the Czech Republic
369 IBD patients followed up in 10 gastroenterological ambulancies in various parts of the Czech Republic were enrolled (200 male, 196 female, 210 CD, 186 UC). During one ambulatory visit patients filled up a questionnaire where they evaluated their adherence. The data was processed by descriptive statistics and factor analysis.
12 % of patients stated they minimally once in the past voluntarily discontinuated their treatment, without their gastroenterologist's consent. 19 % of patients voluntarily lower the prescribed doses and 11 % of patients occasionally do not refill the medication in time. There were founded no statistically significant differences in adherence between genders, disease type, previous bowel surgery, marital status, smokers and non-smokers and other demographic variables. 42 % of patients admitted non-voluntary non-adherence (occasionally forgotten prescribed daily doses).
Factor analysis proved non-adherence to be in a positive correlation with disease activity (non-adherent patients have a higher activity of the disease).
3. Analysis of potential drug interactions in IBD patients medications
Complete medications (drugs prescribed by gastroenterologist and by general practitioner, OTC drugs and nutritional suplements) of 573 patients (284 male, 289 female, 327 CD, 246 UC), enrolled in above mentioned studies, were analyzed by Thomson MICROMEDEX DRUG - REAX® System. All the identified interactions were considered as potential, there were no proofs if patient was harmed by them. Number of prescribed medicines increases with patient's age. In the examined cohort, 53 patients (9,2 %) were exposed to minimally one potential drug interaction. Overall 81 potential drug

interactions of any severity were identified. 8 (9,8 %) drug interactions were classified as minor, 52 (64,3 %) as moderate and 21 (25,9 %) drug interactions were classified as major.

Occurrence of potential drug interactions, classified as „major", increases with patient's age.

In the group of drug interactions classified as „major", unsuitable combination of angiotenzine converting enzyme inhibitor and kalium sparing diuretic was the most frequent. This combination may cause severe hyperkalemia.

The most often interaction classified as „moderate" was combination of iron containing medicines with proton pump inhibitor omeprazole, which may cause significant reduction in absorption of iron.

Drug interactions may be a serious clinical problem. In our examined cohort, almost one tenth of the patients was exposed to minimally one potential drug interaction. A pharmacist can be very important in the process of drug interactions detection. He is educated in the problematics of drug interactions and his knowledge should be intensively improved during postgradual education.

Conclusion

If there is a lack of pharmacotherapy efect, a gastroenterologist should also think about possible insufficient patient's adherence to the treatment. As for inflammatory bowel disease we proved non-adherence is quite common in patients. Besides knowledge on most frequent forms and reasons of non-adherence we also proved non-adherence correlates with higher disease activity. By factor analysis this was proved in both of our studies of adherence to pharmacotherapy of IBD.

Voluntary treatment discontinuation or doses lowering may be caused by adverse drug effects. Adherence to the treatment seems to be strongly influenced by patient's knowledge on disease and prescribed medicines, it means patients should be optimally informed and importance of maintainance treatment should be accented to them.

A numerous potential drug interactions were found in IBD patients medications.

Almost every tenth patient was exposed to minimally one potential drug interaction. This may pose a serious problem and healthcare providers should be intensively educated in this problematics.