





[10%], the average leukocytes count after 12 weeks of treatment with clozapine was 5.7 [9].

The initial average granulocytes count was 2.608 [10] the average granulocytes count after 4 weeks of treatment with clozapine was 2.710 [10%], the average granulocytes count after 8 weeks of treatment with clozapine was 2.536 [10] the average granulocytes count after 12 weeks of treatment with clozapine was 2.598 [10]. Significant changes in white blood count (leukocytes, agranulocytes) during treatment with clozapine were not observed (Table 3).

Potential side effects caused by clozapine in patients treated with pharmacoresistant schizophrenia were evaluated after 12 weeks of therapy. Sedation was detected in 40% of patients, hypotension (blood pressure below 100/60 Torr) was observed in 20% of patients, weight gain (more than 5 kg in last 12 weeks) was detected in 40% of patients. Agitation was observed in 20% of patients, increase in venous blood glucose level (fasting glucose level from venous blood above 5.2 mmol/l - when initially normal level) was detected in 40% of patients, as well as increase in level of blood lipids (cholesterol above 5.0 mmol/l or triglycerids above 1.7 mmol/l - when initially normal levels) which was detected in 40% of patients (Table 4).

## Discussion

Clozapine is used as a "rescue" antipsychotic for patients with pharmacoresistant schizophrenia when former treatment by two different antipsychotics in adequate dosage and length of treatment fails. This is the general recommendation for adult patients with pharmacoresistant schizophrenia, however, guidelines for treating pharmacoresistant schizophrenia in elderly are missing. Thus, therapy of pharmacoresistant schizophrenia in elderly very often remains either empirical or "palliative" - this therapy usually covers just some of

the main symptoms such as aggression, behavior or sleep disturbances although treating pharmacoresistant schizophrenia in elderly by clozapine is not a contraindication [1-5].

Clozapine has many potential side effects which may impede in routine use of clozapine for treating pharmacoresistant schizophrenia in psychogeriatrics - anticholinergic side effects and potentially severe myelotoxicity are the most important.

Anticholinergic side effects of clozapine used in psychogeriatrics may lead to cognitive deterioration, delirious states, constipation, weight gain, increase of intraocular pressure in angular glaucoma, xerostomia, xerophthalmia, difficulties with miction or even severe and potentially lethal paralytic ileus [5,6,14].

The results of this observational study show the potential of clozapine to clinical improvement of symptoms in senior patients with pharmacoresistant schizophrenia, this result is in accordance with other authors [9,11]. Average CGI-S 12 week score was 3,6 with range from 3 to 4. It means mild residual psychotic symptoms (CGI-S=3) or moderate residual psychotic symptoms (CGI-S=4). Such improvement of psychotic symptoms thanks to clozapine was observed in different studies [15-18]. No clinically evident changes in white blood cells count in treated seniors were observed, this result can't be compared to similar finding in literature (research for myelotoxicity of clozapine in elderly hasn't been done). Other side effects, such as sedation, hypotension, weight gain, agitation, increase of blood glucose and lipid level, were detected in this research. This finding is in accordance with other researchers in this field [11-13]. Watchful monitoring of side effects of clozapine used in elderly is inevitable [12,13].

Limits of this research can be seen in limited size of the studied group of patients (n=ve) which makes interpretation of results difficult.


On the other hand, pharmacoresistant schizophrenia in elderly treated with clozapine for the patients first time at the old age is a clinical rarity, this extraordinary phenomenon is a barrier to size of studied group of patients. Another limit comes from design of the study, which was designed as open and unblinded study.

## Conclusion

Clozapine can be used as "rescue"antipsychotic for treating the pharmacoresistant schizophrenia in elderly. Clozapine has proved clinical efficiency in pharmacoresistant schizophrenia in old age patients together with relative safety and relatively good tolerance by a patient. However, monitoring of side effects of clozapine used in elderly is inevitable and this is by a