

## **Pilot Study of Clozapine Treatment in Patients Suffering from Resistant Schizophrenia**

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Clozapine is currently the only proven effective drug intervention in patients with resistant schizophrenia, or intolerant to extra pyramidal side effects. It is therefore recommended to all the patients who do not respond to or cannot tolerate at least two other antipsychotics. The main factor limiting its use is the risk of potentially fatal agranulocytosis, which occurs in 1 - 2% of treated patients.

The objectives of the present study were to describe the basic demographic data of patients suffering from resistant schizophrenia who are on long term clozapine and to establish a correlation between the dose and the duration of clozapine with the mean neutrophil count of the patients.

The study was designed as a descriptive cross sectional study. All patients in the clozapine clinic in the Teaching Hospital, Peradeniya were selected. Information on age, sex, date of commencement of clozapine, duration of the treatment, initial clozapine dose, current clozapine dose and the six recent neutrophil counts were taken from the patients' clinic records. The data were analysed using SPSS software.

In the study population 67% were males, and the mean age was 32.5 years; ranging from 16-72 years. Mean duration of treatment was 49.35 months (SD=36.03). Mean clozapine dose of the sample population was 310 mg (SD=112.42). Mean neutrophil count was 61% (SD=8.42). During the course of treatment clozapine was withheld in 3% of the study population due to very low neutrophil counts. Other 97 patients were responding well to the treatment and were in remission during the course of treatment with clozapine. There was a significant negative relationship between clozapine dose and neutrophil count ( $F = 9.174$ ,  $p = 0.003$ ), suggesting a possible impact of high clozapine dose on neutrophil count, one of the most feared complications of clozapine. There was no relationship between duration of treatment and neutrophil count ( $F = 0.168$ ,  $p = 0.683$ )

Vigilant monitoring of the patient while on clozapine treatment is very important due to a fatal complication of agranulocytosis. The fact that dose of clozapine is positively correlated with the risk of neutropaenia should be kept in mind when titrating clozapine to higher doses in patients. Duration of clozapine treatment showed no association with neutropaenia. This is supported by the fact that most of the episodes of agranulocytosis occurs in the first 6 months of initiation of therapy and then the risk declines steadily.