ORIGINAL RESEARCH PAPER

Volume-8 | Issue-4 | April-2019 | PRINT ISSN No 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

SEVERE EOSINOPHILIA INDUCED BY CLOZAPINE: A CASE REPORT

Psychiatry

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KEYWORDS

INTRODUCTION:

Clozapine, an atypical antipsychotic, is drug of choice for treatment resistant schizophrenia. However, because of life threatening adverse effects like agranulocytosis, seizure, cardiomyopathy, clozapine-induced gastro-intestinal hypomotility and rarely eosinophilia[1]; clozapine is used in only resistant cases with mandatory regular investigations. There have been extensive research regarding all above mentioned adverse effects but limited data for transient eosinophilia. Eosinophilia has been reported as an uncommon side effect of clozapine and is seen in around 1% in clozapine-treated patients[1]. In almost all cases, the second reaction will occur more rapidly, be more severe and last longer than the first[2]. Proposed mechanism reported to be hypersensitivity reaction[3]. Here, we discuss a case of treatment resistant schizophrenia who developed clozapine-induced severe eosinophilia in the initial phase of treatment.

Case:

Mr. S, a 42 years old married male with diagnosis of treatment resistant schizophrenia as per NICE (National Institute for Health and Care Excellence) guidelines; with total duration of illness of 6 years; and did not show response with 60 mg per day of haloperidol for almost 9 weeks and risperidone 6 mg per day for more than 8 weeks separately in outpatient treatment; therefore decision was taken for inpatient management of patient with clozapine. After admission a baseline workup to start clozapine was done including complete blood count, kidney function test liver function test, fasting and post prandial blood sugars, lipid profile, electroencephalogram, electrocardiogram. All the baseline workup was within normal limits. As per NICE, 12.5 mg night dose clozapine was started; which was increased by 25mg every alternate day. When dose was 300mg per day, an abrupt rise in eosinophils (55% of total leucocyte count; absolute eosinophil count 6200) was noted on alternate day monitoring of blood counts. No rash or any sign of allergic reaction was noticed. All other lab investigations including routine urine microscopy, peripheral smear, EEG, ECG, were within normal limits.

In view of eosinophilia, clozapine was stopped and patient was kept on daily monitoring of blood counts and any danger sign. Within a week, eosinophil counts started decreasing and normalized over next two weeks.

DISCUSSION:

Eosinophilia is a significant finding associated with clozapine and has been reported rarely.[4] Eosinophilia if develops, usually appears within 4 weeks of starting of clozapine therapy. The drug induced eosinophilia has been defined as >600/mm^3 eosinophil count in peripheral blood smear and hypereosinophilia as with a count of more than 1500 eosinophils/mm^3 of blood.[5]

Here, we are discussing a case, who developed severe eosinophilia (hypereosinophilia) after starting clozapine within 2 weeks and normalized within 2 weeks of stopping clozapine. In the present case maximum eosinophil count is reported to be 55%. Similarly, Majumdar et, al. also reported eosinophil count up to 35% in their case report[6]. Maximum eosinophil was observed to 6200 in our case, which is similar to the findings reported by Abreu[7].

No clear cut monitoring guidelines are available for eosinophilia developed while using clozapine. Hence, treating physician should give attention to the eosinophil count as well, while reviewing the blood counts.

Conflict of interest: None.

REFERENCES

1. Karmacharya R, Mino M, Pirl WF. Clozapine-induced eosinophilic colitis. Am J Psychiatry. 2005;162:1386–7.
2. Dunk LR et al. Rechallenge with clozapine following leucopenia or neutropenia during previous therapy. Br J Psychiatry 2006; 188:255–263
3. Whiskey E et al. Restarting clozapine after neutropenia: evaluating the possibilities and practicalities. CNS Drugs 2007; 21:25–35
4. Schuepbach D, Merlo MC, Kaeser L, Brenner HD. Successful challenge with clozapine in a history of eosinophilia. Int Clin Psychopharmacol. 1998;13:33–7.
5. Hummer M, Sperner-Unterweger S, Kemmler G, Falk M, Kurz M, Oberbauer H, et al. Does eosinophilia predict clozapine induced neutropenia? Psychopharmacology (Berl) 1996;124:201–4.
6. Majumder P, Chadda RK, Goyal P, Mittal A, Kumar N. Clozapine induced eosinophilia. Indian J Psychiatry. 2011;53(2):152-3.
7. T.AbreuA.; CarvalhoO.; Von Doellinger. Eosinophilia associated with clozapine – A case report. European Psychiatry , Volume 41 , S750 - S751.