Clozapine: Does it work? Analysis of a 15 year experience

Corresponding Author:
Dr. Ennio Piantato,
Division Chief / Dept of Mental Health, Azienda Ospedaliera Nazionale, Alessandria, 15121 - Italy

Submitting Author:
Dr. Ennio Piantato,
Division Chief / Dept of Mental Health, Azienda Ospedaliera Nazionale, Alessandria, 15121 - Italy

Article ID: WMC002256
Article Type: Case Report
Submitted on: 24-Sep-2011, 06:42:23 PM GMT Published on: 25-Sep-2011, 03:38:01 PM GMT
Article URL: http://www.webmedcentral.com/article_view/2256
Subject Categories: PSYCHIATRY
Keywords: Clozapine, Schizophrenia, Results

How to cite the article: Piantato E, Sartore F. Clozapine: Does it work? Analysis of a 15 year experience. WebmedCentral PSYCHIATRY 2011;2(9):WMC002256

Source(s) of Funding:
No fund required

Competing Interests:
None
Clozapine: Does it work? Analysis of a 15 year experience

Author(s): Piantato E, Sartore F

Abstract

This is an overview of results after a 15 year follow-up of psychotic patients treated mainly with Clozapine. We have found out that their quality of life has improved, they are good compliant in taking their medications and the number of hospitalizations is greatly reduced after beginning treatment with Clozapine.

Introduction

This report contains data about use of Clozapine in our Psychiatric Unit during the period June 1995-June 2009. Clozapine is an anti-psychotic drug created at the end of 60's, with a particular receptor profile. Due to some cases of granulocytopenia noted in Finland the drug was withdrawn in 1975. It was reintroduced in the 90's with indication for “resistant schizophrenia” and a recommendation to monitor blood cell counts. Since 1995 Clozapine has been officially used in Italy for “resistant schizophrenia”. In 1995 we started using Clozapine after two of us attended a course at the Psychiatric Clinic of the Bern University, Switzerland. Our Psychiatric Unit is part of a Department of Mental Health and situated in the Alessandria general hospital, in the region of Piedmont in NW Italy, serving a population of 180,000 inhabitants. The unit has 15 beds plus 1 bed for Day Hospital service. Initially Clozapine was used with so-called treatment-resistant schizophrenic patients, showing resistance to traditional and at least two atypical antipsychotic treatments as reported in international guidelines. [1] Afterwards the treatment with Clozapine was extended to patients affected by non-schizophrenic disturbances such as bipolar disorder.

Materials and Methods

Our report includes the group of patients currently taking Clozapine and attending our centre for blood test control. Almost all of them started Clozapine while hospitalized in our Psychiatric Unit. At the moment the group is made up of 54 patients: 41 males (76%) and 13 females (24%).

Originally the use of Clozapine began with 6 patients (4 males and 2 females) who are still under the care of our centre.

Average age of patients is $43\pm9.9$ for the total group: for the male group average age is 40, for the female group it is 46. Age range is from 26 to 69 years. All patients live at home with 8 exceptions: 6 of them live in sheltered apartments and 1 is in a nursing home. Regarding the diagnoses, 48 patients (88.9%) are affected by schizophrenia, 4 (7.4%) by a schizoaffective disorder and 2 (3.7%) by bipolar disorder with psychotic behaviour. (Tab 1).

Our doses of Clozapine vary from 100 to 900 mg per day: doses are higher – usually - on discharge from hospital (150 to 900 mg per day) then they tend to diminish to a medium 75 to 600 mg per day.

Clozapine is used as monotherapy in 19 patients (35.1%). It’s also used in association with other psychototropic drugs (sometimes more than one per category) in remaining cases: more precisely in association with mood-stabilizers in 19 patients, antipsialloric drugs in 4 patients, anticholinergic medications in 19 patients, other antipsychotic drugs in 20 patients, benzodiazepines in 10 patients and antidepressants in 3 patients.

We have observed that the side effects of treatment with Clozapine are most frequently:-sialorrea (excessive salivation); constipation; low blood pressure; psychomotor slowing; weight increase; in one case an epileptic fit was controlled by adding an anti-epileptic drug so the global treatment could be continued without having any other problem; two patients are affected by epilepsy in co-morbidity and take anti-epileptic drugs. In this group we have not had any granulocytopenia. We have observed a reduction in hospital admissions after beginning treatment with Clozapine, above all in the male group. In 22 patients (40.7% of the group) we haven’t had further hospital admissions. (Tab 3 and 4).

Discussion

Results

The reduction of hospitalizations is reported [2,3] and explained as “effect of objective improvement of some clinical parameters and better social and job adaptability” [4] this is consistent with the self
evaluated subjective improvement registered by our patients and by authors. [5] Clozapine alone isn’t always enough. In our group Clozapine is often associated with other psychotropic drugs and it is used as the only antipsychotic drug in 19 patients; among most frequently used drugs in association there are other first and second generation antipsychotics.

Regarding the association between Clozapine and other antipsychotics we found that two patients of the group have been included in the CHAT study (experimental cohort with Clozapine enhanced associating another antipsychotic drug, aripiprazole or haloperidol). [6] No patient of ours has tried or succeeded in committing suicide so far and this is consistent with other reports [7]. Clozapine has also produced good results with patients whose behaviour had been violent specially in a etero-directed way. Scientific evidence shows that continuous use of anti-psychotic drugs in schizophrenics prevents relapses. Compliance with treatment is important in all chronic pathologies and in our group especially an interruption of treatment provokes various consequences, first of all the risk of a relapse with hospitalization (up to “revolving-door” conditions) plus blockage of the personal therapeutic and rehabilitation project. The reduction in hospitalization observed in our group is the verification of good compliance with treatment included the regular carrying out of their blood tests. Moreover patients have been also monitored via analysis of plasma levels of Clozapine. We have begun to use metformin in some of our patients to control weight gain due to the treatment with Clozapine: so far the results appear good but the time of observation (4 months) is too short to allow us to be more specific. [8,9]

Conclusion

Clozapine is an antipsychotic whose use is limited by some side effects, some of which are potentially deadly. Many clinical studies have confirmed its efficacy especially on positive schizophrenic symptoms in the long term treatment and in drug-resistant schizophrenia, moreover it is the antipsychotic used in case of psychoses in patients with Parkinson’s disease. [10,11,12,13] Our considerations, based on our clinical group, are in line with results ofthese studies: this is particularly evident in patients who have never been re-hospitalized after taking Clozapine notwithstanding the gravity of their mental pathology: i.e. two women had even previously been treated with convulsive therapy, so far both of them have had good health since 1995 after since using Clozapine.

References

7. Llorca PM, Perez JJ.: Leponex, 10 ans après. Une revue clinique. L’Encéphale, 2004; XXX: 474-479
13. MercierC, Bret P, Bret MC, Queuille E: Enquête
Illustrations

Illustration 1

Tab 1: Diagnosis (total group)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>TOTAL</th>
<th>MEN</th>
<th>WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schizophrenia</td>
<td>48</td>
<td>37</td>
<td>11</td>
</tr>
<tr>
<td>Schizoaffective disorder</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Patients affected by schizophrenia are subdivided as follows: paranoid schizophrenia (19); undifferentiated disorder (12); disorganized schizophrenia (15); catatonic schizophrenia (1) chronic (1) (Tab 2)
Illustration 2

Tab 2: Schizophrenia sub-types

<table>
<thead>
<tr>
<th>Sub-type</th>
<th>TOTAL</th>
<th>MEN</th>
<th>WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catatonic</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Disorganized</td>
<td>15</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Undifferentiated</td>
<td>12</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Paranoid</td>
<td>19</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Chronic</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>
Illustration 3

Tab 3 : Hospitalizations

<table>
<thead>
<tr>
<th></th>
<th>TOTAL</th>
<th>MEN</th>
<th>WOMEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of hospitalizations</td>
<td>522</td>
<td>447</td>
<td>75</td>
</tr>
<tr>
<td>Before treatment with clozapine</td>
<td>413</td>
<td>354</td>
<td>59</td>
</tr>
<tr>
<td>After treatment with clozapine</td>
<td>109</td>
<td>93</td>
<td>16</td>
</tr>
</tbody>
</table>
Illustration 4

Tab 4: Patients never re-hospitalized after treatment with Clozapine

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>22 (41.7%)</td>
</tr>
<tr>
<td>MEN</td>
<td>15</td>
</tr>
<tr>
<td>WOMEN</td>
<td>7</td>
</tr>
</tbody>
</table>
Disclaimer

This article has been downloaded from WebmedCentral. With our unique author driven post publication peer review, contents posted on this web portal do not undergo any prepublication peer or editorial review. It is completely the responsibility of the authors to ensure not only scientific and ethical standards of the manuscript but also its grammatical accuracy. Authors must ensure that they obtain all the necessary permissions before submitting any information that requires obtaining a consent or approval from a third party. Authors should also ensure not to submit any information which they do not have the copyright of or of which they have transferred the copyrights to a third party.

Contents on WebmedCentral are purely for biomedical researchers and scientists. They are not meant to cater to the needs of an individual patient. The web portal or any content(s) therein is neither designed to support, nor replace, the relationship that exists between a patient/site visitor and his/her physician. Your use of the WebmedCentral site and its contents is entirely at your own risk. We do not take any responsibility for any harm that you may suffer or inflict on a third person by following the contents of this website.