

Myoclonic and generalized tonic clonic seizures during combined treatment with low doses of clozapine and haloperidol

E.M. Haberfellner*

Friedrichstraße 14, A-4040 Linz, Austria

(Received 18 October 1981; accepted 29 November 2001)

INTRODUCTION

Although it is well known that antipsychotic drugs can lower the seizure threshold, the traditional antipsychotic drugs usually do not substantially affect seizure risk. Clozapine has a clinically relevant seizure risk especially in middle and high doses. Low doses up to 300 mg clozapine/d have a seizure rate of approximately 1% [4]. Myoclonic seizures without loss of consciousness also occur with clozapine treatment, sometimes followed by tonic-clonic seizures [5-7, 10]. Most patients with myoclonic seizures reported in the literature were treated with daily clozapine dosage between 300 and 600 mg [1-3, 6, 8-10]. The following case report describes myoclonic seizures and a generalized tonic clonic seizure during treatment with low doses of clozapine and haloperidol.

CASE REPORT

A 29-year-old woman with schizophrenia, paranoid type, had been treated several months with clozapine 100 mg/d and haloperidol 10 mg/d. This treatment had been started in a psychiatric hospital and continued by a psychiatrist in private practice. When she made a first appointment in the author's psychiatric practice she reported moderate delusional symptoms.

Clozapine-dosage was therefore increased from 100 to 150 mg/d. The haloperidol dose of 10 mg/d remained unchanged. As the patient intended to travel to the USA only one week later a substantial change of medication seemed inappropriate. After her holidays she reported several sudden involuntary contractions of shoulder and arm muscles which had resulted in her dropping objects. Once she experienced a sudden flexion of her knees and fell down without any alteration of consciousness or other complaints. Some days later a generalized tonic clonic seizure occurred. The patient had no previous history or family history of epilepsy. After reduction of the clozapine dose to 100 mg/d she had no more seizures or myoclonic jerks. EEG after the dose reduction still showed paroxysmal patterns (generalized spikes).

DISCUSSION

Compared with the cases of myoclonic seizures reported in the literature the clozapine dose in my patient was low (150 mg/d). Only two authors report myoclonic seizures below 300 mg of clozapine – one with 200 mg [2], the other with 250 mg [10]. Three of the cases reported in the literature had been treated with clozapine in combination with haloperidol. Co-medication with haloperidol might have increased vulnerability to

*Correspondence.

E-mail address: e.m.haberfellner@aon.at (E.M. Haberfellner).

myoclonic and grand mal seizures. Myoclonic seizures can be misinterpreted by patients and psychiatrists as nervousness or collapse. Patients' reports of myoclonic jerks during treatment with clozapin – even with low dosage – should be taken seriously, because they can be followed by generalized tonic clonic seizures.

REFERENCES

- 1 Antelo ER, Stanilla JK, Martin-Llonch N. Myoclonic seizures and “leg folding” phenomena with clozapine therapy: report of two cases. *Biol Psychiatry* 1994 ; 36 : 759-62.
- 2 Bak Th, Bauer M, Schaub RT, Hellweg R, Reischies FM. Myoclonus in patients treated with clozapine: a case series. *J Clin Psychiatry* 1995 ; 56 : 418-22.
- 3 Berman I, Zalma A, DuRand CJ, Green AI. Clozapine-induced myoclonic jerks and drop attacks. *J Clin Psychiatry* 1992 ; 53 : 329-30.
- 4 Devinsky O, Honigfeld G, Patin J. Clozapine-related seizures. *Neurology* 1991 ; 41 : 369-71.
- 5 Devinsky O, Pacia SV. Seizures during clozapine therapy. *J Clin Psychiatry* 1994 ; 55 (Suppl) : 153-6.
- 6 Gouzoulis E, Grunze H, Bardeleben U. Myoclonic epileptic seizures during clozapine treatment: a report of three cases. *Eur Arch Psychiatry Clin Neurosci* 1991 ; 240 : 370-2.
- 7 Haller E, Binder RL. Clozapine and seizures. *Am J Psychiatry* 1990 ; 147 : 1069-71.
- 8 Meltzer HJ, Ranjan R. Valproic acid treatment of clozapine-induced myoclonus. *Am J Psychiatry* 1994 ; 151 : 1246-7.
- 9 Povlsen UJ, Noring U, Fog R, Gerlach J. Tolerability and therapeutic effect of clozapine. *Acta Psychiatr Scand* 1985 ; 71 : 176-85.
- 10 Sajatovic M, Meltzer HY. Clozapine-induced myoclonus and generalized seizures. *Biol Psychiatry* 1996 ; 39 : 367-70.