

## Delusions of Infestation Treated with Pimozide: A Follow-up Study

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Fourteen patients with monosymptomatic delusions of infestation were followed-up 19–48 months after treatment with pimozide was terminated. Seven patients had remained in remission since the treatment. Three had developed relapses, but were without symptoms with intermittent treatment. Four patients responded poorly to pimozide and had still symptoms at the follow-up. The study indicates, that a large proportion of patients with monosymptomatic delusions of infestation treated with pimozide will be able to discontinue the medication for years without recurrence of their delusions. *Key words: Monosymptomatic psychosis.* (Received October 10, 1984.)

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Parasitophobia or more precisely delusions of infestation (DI) was first described by Thibierge (1). The patients are not suffering from phobias, but from delusions, because they are convinced, that the insects exist, and that they are infested with them.

DI can be seen in association with various psychiatric and physical disorders such as paranoia, manio-depressive psychosis, toxic psychosis, hypochondriacal paranoia and organic brain syndrome. It can also be seen as a monosymptomatic psychosis, where the individual only has a single hypochondriacal complaint (2–5).

Various neuroleptics with or without combination with tricyclic antidepressant drugs have been used in the treatment of this disorder with no impressive results (6, 7). In 1975 pimozide was introduced, as a very promising drug in the treatment of these patients (8, 9). A double-blind trial has confirmed its efficiency (10).

This paper presents a 34-month follow-up of 14 patients with monosymptomatic DI treated with pimozide.

### MATERIAL AND METHODS

From January 1979 to September 1982, 18 patients with DI have been treated with pimozide. Fourteen patients, who had been classified as having a monosymptomatic paranoia, were included in the follow-up study. Of these 6 had participated in a double-blind trial with pimozide, described elsewhere (10). Two patients, who according to the case records were senile (failing memory), one who was classified as having a hypochondriacal paranoia and one, who suffered from a paranoid schizophrenia, were excluded.

The median duration of the disease before the pimozide treatment was 10 months (range 1–120). Median duration of the initial treatment periods was 5 months (range 1–10).

Data concerning the effect of the pimozide treatment were obtained from the files. The patients were interviewed by telephone concerning the course of their symptoms after withdrawal of the pimozide medication and inquired whether they wanted to resume the pimozide treatment if the symptoms returned. Thirteen patients were interviewed. One patient had died one month before the call, but here daughter answered the questions.

The median age at follow-up was 75 years (range 49–89). There were 12 females and 2 males. Median follow-up time after treatment was 34 months (range 19–48) (Table I).

### RESULTS

The patients were divided into three groups, I) patients without recurrences of the symptoms after the initial treatment with pimozide, II) patients with well defined recur-

rences which could be controlled by pimozide, and III) patients with constant symptoms during the follow-up period (Table I).

#### *Results of the initial pimozide treatment*

*Group I* (7 patients). Improvement was noted after one week in 2 patients and after 2–3 weeks in 5 patients. All were free of symptoms after 1–10 months. *Group II* (3 patients). Improvement was noted after 2 weeks in 2 patients and after 4 weeks in the last patient. All were symptom-free after 1–4 months. *Group III* (4 patients). Improvement was noted after 2–3 weeks in 3 patients. In one of these a distinct effect was seen after 2 months, while only a moderate effect was obtained by the other 2 after 3–7 months. No relief was experienced by the last patient after 3 months of treatment.

#### *Results of the follow-up*

*Group I.* All 7 patients remained completely free of symptoms during the follow-up. None had received pimozide since the initial treatment.

*Group II.* Two patients had few recurrences, which responded to pimozide after a few days. The tablets had been administered by the patients themselves in daily doses of 1–2 mg. The third patient did not have symptoms the first 2 years after the initial treatment. Since then she had experienced recurrences every 2–3 months. When treated with pimozide intermittently the symptoms disappeared.

*Group III.* One patient had severe symptoms until she died 48 months after the treatment. The remaining patients all had symptoms at the follow-up, although one had improved spontaneously to some extent. One patient had been treated with pimozide for a total of 2 years with only moderate effect. The remaining three had not been given pimozide or any other drug treatment during the follow-up period.

All patients in groups I and II claimed that while having the symptoms, it was the most terrible experience, they had ever had, and they all wanted to resume pimozide treatment in case of recurrence. Only one patient in group III wanted further pimozide treatment.

At follow-up one patient in group I complained of a possible side effect of pimozide. She had a slight twisting of her lips, which had been present since the treatment. The patient had received pimozide for 6 months in a maximal daily dose of 4 mg. Three patients in

Table I. *Patient characteristics*

Group	Sex	Age median (range) (yrs)	Duration of symptoms before treatment median (range) (months)	Duration of initial treatment median (range) (months)	Follow-up after end of treatment median (range) (months)
All patients	12 F 2 M	77 (49–89)	10 (1–120)	5 (1–10)	34 (19–48)
I	6 F 1 M	67 (49–89)	6 (1–12)	5 (1–10)	33 (19–44)
II	2 F 1 M	74 (64–80)	12 (1–72)	3 (1–4)	29 (21–45)
III	4 F	78 (73–83)	18 (3–120)	5 (3–7)	36 (29–48)

Group I: patients without recurrences during the follow-up. Group II: patients with well defined recurrences controlled by pimozide. Group III: patients with constant symptoms during follow-up.

group I, one in group II and 2 in group III had participated in the double-blind trial with pimozide.

## DISCUSSION

The results of the present follow-up study revealed a favourable prognosis in a majority of our patients with monosymptomatic delusions of infestation after treatment with pimozide. Half of the 14 patients remained symptom-free for at least 19–44 months after the treatment was terminated and 3 could be managed with intermittent treatment. While pimozide is highly efficient in DI (8–10), long term remission after stopping the treatment has previously been reported to be relatively rare (11, 12). However, these studies included patients with associated psychiatric and physical disorders such as schizophrenia, depression, dementia, dysmorphic delusions which includes a conviction of personal ugliness, atherosclerotic disease, etc., whereas our follow-up only considered patients with monosymptomatic DI. This difference between the study groups might explain the more favourable prognosis in the present study. Nearly half of the patients had participated in a double-blind trial with pimozide. This may have had a positive influence on the prognosis because of frequent consultations with enthusiastic doctors. In dealing with these individuals Gould & Gragg (13) have stressed the importance of establishing a positive bond with the patients. However, the patients from the double-blind trial had a similar distribution into the three groups as the rest.

Before pimozide recovery of DI was rare (5, 7, 12). In some patients, there may be some fluctuation of the symptoms, but in many there appears to be an inbuilt acceleration of the disease (15). Wilson (5) reported that out of 34 patients with DI, only one was cured.

If the three groups in the present study were compared with respect to median age and median duration of the symptoms before treatment, it appears that increasing age and a long disease duration indicate a bad prognosis. But there is a great overlap between the groups. No statistical calculations were done because of the small number of patients. Skott (4) did not find significant correlation between age at onset and course of the illness.

One patient probably had developed slight tardive dyskinesia which is considered to be an irreversible side effect of certain types of neuroleptic drugs (16).

In conclusion the present study indicates, that a large proportion of patients with monosymptomatic delusions of infestation treated with pimozide will be able to discontinue the medication for years without recurrence of their delusions.

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