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Letter to the editor

Impotencia coeundi induced by lithium salts

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We would like to make a detailed case record of an erectile impotence induced by lithium salts. The male patient was born in 1946 and has no personal or familiar history of psychiatric interest. In 1964 he suffered a psychotic state which was erroneously diagnosed as schizophrenic. This error is quite usual in young manics (Joyce *et al*, 1984). Since 1970 he suffered from cyclothymia which worsened progressively and forced his admission as an inpatient to the Provincial Psychiatric Hospital. During his stay he attempted suicide by throwing himself through a window. He was admitted again in July 1980 with a manic phase, and treated with neuroleptic drugs and lithium (up to 2 g/day; 0.37 mEq/l). The lithium therapy had to be abandoned because of the side-effects (tremor, hyperhidroses, diarrhea *etc*). Erectile impotence was not observed this time as the patient did not leave the hospital for the entire month.

In September 1981, he was readmitted to the hospital with a manic phase. Neuroleptic drugs and lithium (up to 2.4 g/day; 0.72 mEq/l) were given. As his manic symptoms diminished, he was controlled as an outpatient. His primal claim was the erectile impotence, attributed to the neuroleptic drugs. These were progressively reduced and in July 1982 he was only being given lithium (up to 3 g/day; 0.8 mEq/l) but the *impotencia coeundi* continued as the sole side-effect. The patient on his own account reduced lithium to 1.2 g/day at the end of December, suffered a new manic phase and was readmitted as an inpatient in January 1983. Lithium was increased (up to 2.8 g/day; 0.75 mEq/l) and neuroleptic drugs where given, but the erectile impotence reappeared.

The *impotencia coeundi* forced the patient to abandon the lithium in May 1983, thus he was readmitted in June. Lithium was again given as usual (up to 2.9 g/day; 0.75 mEq/l) along with neuroleptics but the patient complained of erectile impotence. He was discharged from hospital in July 1983 according to the schedule, abandoned lithium but not the neuroleptic drugs in August; the *impotencia coeundi* disappeared but he suffered a new manic phase and was admitted again in September.

In December 1983 he took only lithium (2.8 g/day; 0.78 mEq/l) but as the erectile impotence persisted the staff withdrew the lithium salts and, since as of 1978 the patient suffered only manic phases, he was administered 25 mg fluphenazine depot each month and remained euthymic.

In May 1991, after eight years of asymptomatic state, the staff decided to withdraw the fluphenazine decanoate but shortly after the patient suffered a manic phase and was admitted to the Provincial Hospital. Lithium was given again with a dose of 1.2 g/day (0.4 mEq/l) but was finally withdrawn when the erectile impotence reappeared.

Discussion

As we can see, the erectile impotence was present as long as the patient was on lithium therapy. It is true that on certain occasions he took lithium along with neuroleptic drugs, which could lead us to think that the impotence was due to these drugs. But we must emphasize that: from September 1981 to June 1982, the neuroleptic drugs were progressively reduced and finally withdrawn, but the impotence remained; in July 1983, the patient abandoned the lithium but continued the intake of neuroleptics and was free from the impotence; in December 1983, his only pharmacological treatment was lithium and impotence appeared; from 1983, he was maintained on depot neuroleptics without sexual complaint; when in May 1991 lithium therapy was attempted again, the impotence reappeared even with infratherapeutic doses.

The history of this patient's treatment is quite a "changing criteria design" which allows to infer the effects of lithium on the sexual functions of this patient.

In spite of the great amount of studies to which the clinical use of lithium has been subjected, the disorders of the sexual sphere are rarely described (Johnson, 1987). It is certainly not an unknown topic in the worldwide literature and a quite recent volume on lithium therapy devotes a whole chapter to this, but these cases are extremely rare (Blay, 1987). In a recent work on the sexual function of patients who take both lithium and benzodiazepine (BZD) the conclusion is that lithium *per se* does not hinder the sexual function, while its combination with BZD seems to hinder it in 50% of the patients (Ghadirian, 1992). It is highly probable that the frequency is higher than it seems because the clinical attention is focused on other, more threatening, side effects. But we should not forget that erectile impotence can affect the compliance and likewise the clinical evolution, as in our case. The probable mechanism of action of lithium seems to be the inhibition of the DA-sensitive adenyl-cyclase (Lal *et al*, 1989). What is valuable about the case which we present is the manifest relationship that has been established between the use of lithium and

the apparition of erectile impotence in the patient. As far as we know this is the first case in the literature in which there is compelling evidence that lithium treatment could cause impotence in males.

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