Effect of L-DOPA on Sexually Impotent Patients

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Abstract. In a pilot study ten sexually impotent patients, in whom psychic causes could be excluded to a large extent, were selected to take L-DOPA for about 12 weeks. Two had to be excluded because of side-effects. The most obvious effect was the increase in frequency of spontaneous erection during the night. A slight to moderate increase in degree of penile erection was also observed for 6 of 8 patients, but the erection ability was insufficient to consummate sexual intercourse. An increase in libido was observed in two patients only. Psychic changes were not found; only one patient showed high irritability. Five patients noticed that they could carry out their daily work more efficiently.

Key words: L-DOPA — Human Sexual Behaviour — Working Capacity.

Ever since the introduction of L-DOPA for the treatment of Parkinsonian patients, there have been recurrent observations on increased sexual activity after L-DOPA has been administered and the state of patients has improved [6,7]. Nonetheless, the question arises whether the increase in libido or potency is to be attributed to general clinical improvement or to the specific effect of L-DOPA. In order to clarify this, the effect of L-DOPA on patients with sexual impotency was investigated in a pilot-study. Only those patients were selected in whom psychic causes could be excluded to a large extent. The selection took place after a psychiatric interview of one hour.

Methods

Ten male out-patients who had sought consultation because of insufficient penile erection with or without decreased libido were selected for this study. The following criteria were observed: decreased penile erection for at least one year; the patients had to be above 25 years and to have had sufficient experience in sexual intercourse. Psychic factors, especially aversion for the partner, were excluded. Nine out of ten patients had a steady partner. Three patients suffered from diabetes mellitus, two of these had polyneuritis. The heart and blood-pressure were normal as
was also the genital area. For three subjects a spermiogram was taken before and at the end of the L-DOPA therapy.

The patients were interviewed by a psychiatrist before, and weekly during the course of treatment.

The interview, taken by one psychiatrist, was tape-recorded, and then evaluated, by two further psychiatrists, by means of questionnaires. Meanwhile, the patients filled out daily questionnaires in which the most important questions referred to sexual activity. A questionnaire on depression was filled out before and at the end of the L-DOPA therapy [11].

Four patients first received the decarboxylase inhibitor Ro 4-4602 [N (DL-Seryl)-N'- (2,3,4-trihydroxy-benzyl) hydrazine] for three weeks (200 mg/day) in combination with L-DOPA (800 mg/day). Thereafter all patients received L-DOPA only until a dosage of 5 g/day was reached, which was maintained for ten days. Then 3 g/day L-DOPA was administered for a further period of ten weeks. After a time of twelve weeks the L-DOPA therapy was terminated.

**Results**

One of the ten patients had to be withdrawn because he collapsed in the second week; another because of severe anxiety and irritability in the fourth week. The results in Table 1 therefore refer to eight subjects only.

The pulse rate under the effect of the L-DOPA therapy rose slightly whereas the blood pressure usually sank. Further side-effects, besides temporally indigestion for high L-DOPA doses, were not observed. Hyperkinesis did not occur.

The combination Ro 4-4602 plus L-DOPA had no effect on sexual behaviour on the four patients to whom it was administered. Five grams L-DOPA show no different effect from 3 g.

**Penile Erection.** Between the second and the fourth week 6 subjects experienced a slight to moderate increase in tension of penile erection. (A slight increase was also noted for that patient withdrawn within the fourth week and who is not included in Table 1.) The increase was observed, when at all, during attempts at sexual intercourse, during masturbation, as well as for spontaneous erections during the night. Despite the increase in penile erection, in no case was the erectile ability sufficient to enable sexual intercourse to take place, as formerly experienced. One patient noted a more distinct increase which was maintained until the end of therapy. As for the other patients, penile erection decreased after 6 to 8 weeks, despite further L-DOPA therapy, and in comparison with the time when L-DOPA was not given, no difference of effect was recorded.