

phenytoin for many years and may never develop a clinical correlate of their radiological abnormality.

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## Incontinence of Urine with Long-Term Bromocriptine Therapy

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We report a patient with Parkinson disease who developed incontinence of urine during long-term bromocriptine therapy. The patient was a 47-year-old man who had had Parkinson disease since 1971 and was taking six tablets of Sinemet-25/250 daily. Bromocriptine was started in December, 1976, and the dosage had remained at 50 mg daily since then. He had not undergone any surgical procedures on the genitourinary tract. Six months before this writing the patient developed constant dribbling of urine. He experienced several on-off swings daily and also had episodes of confusion and hallucinations. The incontinence was present throughout the day, even when he was lucid and ambulatory.

He was admitted for evaluation of his incontinence on September 9, 1979. Physical examination revealed nothing other than features of parkinsonism. The prostate was not enlarged. Urinalysis was normal and cultures were negative. Plain roentgenograms of the kidney, ureter, and bladder and an intravenous pyelogram were normal. Spine roentgenograms did not reveal any abnormalities. Cerebrospinal fluid was normal. Because of severe dyskinesias and frequent on-off phenomena, bromocriptine was stopped on the fifth hospital day. Within 24 hours the incontinence started to improve, and it disappeared in three more days. The patient was discharged from the hospital and has been seen in follow-up twice. The incontinence has not recurred since withdrawal of bromocriptine.

The pathophysiology of this patient's incontinence is uncertain. Incontinence of urine with long-term bromocriptine therapy has not been reported in the series reviewed [2, 3, 6, 7]. The fact that it disappeared promptly on discontinuation of bromocriptine suggests that the drug was the causative factor. Our observation in this case is in dis-

agreement with reports of a beneficial effect of bromocriptine in detrusor dysfunction and favors observations made in later studies [1, 4, 5]. This patient probably developed ongoing detrusor instability with long-term bromocriptine therapy. If a patient taking bromocriptine develops incontinence of urine, it may be worthwhile stopping the drug before embarking on an elaborate work-up.

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## Hepatic Cirrhosis and Intracranial Hemorrhage: Significance of the Association in 53 Pathological Cases

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In a recent survey of 431 neuropathological observations of intracranial hemorrhage with pathological examination of the liver collected from 1962 to 1977 at the Laboratoire de Neuropathologie Charles Foix [1], we found 53 (12%) examples of hepatic cirrhosis (Table). Forty-four cases were associated with intracerebral hemorrhage. This high incidence of intracerebral hemorrhage in hepatic cirrhosis was surprising, as it has not previously been reported in the literature [2-4]. To check the significance of these data, we compared the 44 cases of intracerebral hemorrhage with a control group of 100 sex- and age-matched cases from the same laboratory collected during the same period and