with neuroleptic-related EPS whose symptoms disappeared with calcium.

Case reports: (i) A 57-year-old male with chronic organic brain syndrome, hypertension, emphysema with COPD, and diabetes mellitus was confused and depressed on admission. His medications included haloperidol (1 mg, t.i.d.), benztropine (2 mg, o.d.), alprazolam (0.25 mg, q.d.s.) and chlorpromazine (250 mg, b.i.d.). On admission he showed generalised rigidity and drooling of saliva which did not respond to discontinuing haloperidol and increasing benztropine to 2 mg b.i.d. for one week. He was started on calcium (Sandoz) (1 tab, o.d.). The drooling and rigidity disappeared within seven days. Calcium and benztropine were both discontinued, and no neuroleptics prescribed. The symptoms did not recur, and he was discharged a month later.

(ii) A 37-year-old male with paranoid schizophrenia was on several neuroleptic drugs at the time of admission. The medications were tapered to fluphenazine decanoate (injection; 50 mg, 2 weekly). The patient developed drooling of saliva, difficulty swallowing, and tremors of the hands. Fluphenazine was further reduced to 25 mg 2 weekly and benztropine (2 mg, b.i.d.) prescribed for 3 weeks with no relief. Even with diphenylhydramine (50 mg, t.i.d.) for ten days the drooling and dysphagia persisted. The patient was then started on calcium (Sandoz) (1 tab, o.d.) and within two days swallowing improved and the drooling diminished, disappearing completely in 10 days. Calcium was then discontinued and the symptoms recurred within 24 hours. The patient was restarted on calcium and procyclidine and the symptoms disappeared in four days and did not recur during the next 4 months, after which he was discharged on trifluoperazine (2 mg, q.i.d.), procyclidine (5 mg, b.i.d.) and calcium (Sandoz) (1 tab, b.i.d.).

EPS in these two patients did not at first respond to reducing or discontinuing neuroleptics or to adding anticholinergic medication, but disappeared within days of introducing calcium. In the second patient the extrapyramidal symptoms recurred on discontinuing calcium. There is evidence that calcium facilitates dopaminergic synthesis, degradation and release, and may affect the initiation of muscle contraction and relaxation (Ganong, 1987). Calcium also stimulates cholinergic activity (Katz & Miledi, 1965) and may somehow alter the balance of antidopaminergic-anticholinergic activity of neuroleptics, thus influencing the EPS (Ganong, 1987). Recently, Dinan (1987) proposed that neuroleptics act by altering potassium conductance in central neurons, but did not offer an explanation for a role of calcium in causing EPS. The serum calcium levels in both cases prior to introducing calcium were at the lower end of normal limits. Further work needs to be done to see if a relatively innocuous drug like calcium can relieve patients of the distress of EPS.

M. L. D. FERNANDO
R. MANCHANDA

University of Western Ontario
St Thomas Psychiatric Hospital
St Thomas
Ontario
Canada N5P 3V9

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A HUNDRED YEARS AGO

Lunatics in workhouses

The Inspectors of Lunatic Asylums in Ireland, in their recent report, state that the lunatic accommodation afforded in workhouses has been but slightly altered within the past decade; the little done, however, lies in the way of improvement, and is so far satisfactory. The classes in question – imbeciles, epileptics, and idiots – do not require, in the great majority of cases, what may be designated as a genuine asylum treatment, however much their condition might be benefited by a uniform and more liberal attention to personal comforts and requirements, particularly in respect to day-room provision, a better system of ventilation, and means of exercise in the open spaces, the yards allotted to them being for the most part small, rough and gloomy. Hopeless, however, as many of the inmates may be, and incapable of appreciating fully the value of domestic comforts, if not carefully looked after, they not infrequently become very excitable, and subject to outbreaks of violence, particularly epileptics; when as a rule they are transferred to district asylums for indefinite periods, and thus occupy beds that could be far more usefully reserved for acute and curable patients. Hence a double disadvantage results – asylums become overcrowded, and their enlargement a necessity – while between the expense of costly

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additions and a heavier personal maintenance, the expenditure of public rates is increased in probably a two-fold degree. The practical remedy would consist in obliging districts to make suitable provision in one or more of their unions for idiots, confirmed imbeciles, the utterly demented and tranquil, who should as now be supported wholly out of local taxation. In 1884 the inspectors directed the attention of the metropolitan poor-law guardians to the imperfect and painfully restricted accommodation in both their workhouses for their insane inmates, suggesting that a similar provision should be made on their behalf, as advocated at Belfast, by the erection of a pile of buildings, having commodious day-rooms, large dormitories, with some few apartments of smaller dimensions for indoor occupations, and standing on a portion of the extensive unoccupied ground belonging to the South Dublin Union. Judging from the structure at Belfast, the proposed buildings would not cost, when fit for occupation, more than £7,000, the payment of which, extended over fourteen years, would not amount to one half-penny in the pound. In the operation of such a scheme, as immediately affecting the inmates, paid attendants, with some well-conducted paupers, would be ample in the proportion of one to each forty of them.

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