HEAT STROKE AND SCHIZOPHRENIA

Sir,

The coastal city of Chennai faced one of the worst summers in 40 years in the months of May and June 1998. The average day time temperature in the last week of May/first week of June was about 42°C with a humidity of over 70%. Several cases of heat stroke were recorded during this period and admissions for this accounted for over 50% of all general hospital admissions. At the Schizophrenia Research Foundation, we had three inpatient deaths due to heat related problems and nearly 7 outpatients succumbed to this over a period of two to three months. Information on the latter group trickled to us slowly from the families. I present below a case report of a patient who suffered from schizophrenia and died of heat stroke.

She was a forty year old woman who had been suffering from schizophrenia for 22 years and was admitted in the residential rehabilitation facility of SCARF in 1991. Initially considered treatment non-responsive, she began improving with clozapine which was started in 1996. Her positive symptoms, general irritability and episodes of aggression had all improved and she was considered stabilized at a dosage of 300 mgms of clozapine. Regular blood tests were all normal. In the first week of June, she developed high fever with rectal temperature going upto 104°F which did not respond to antipyretics. She had no localising signs of infection or any other physical signs or symptoms. She was transferred to a private nursing home, where she was investigated extensively. She tested negative for malaria, enteric fever and urinary infection. All tests of hepatic and renal functions and ECG were
normal. She was started on rigorous treatment of heat stroke as well as bromocriptine, although there was no clinical evidence of Neuroleptic Malignant Syndrome. She also received intensive measures to bring about body cooling. However, her condition started deteriorating and after about 26 hours, her renal function was affected reflected by steadily increasing levels of urea and creatinine. She became delirious and gradually slipped into coma from which she never recovered. There was profuse bleeding from her gums and nose suggesting of an intravascular coagulation defect. The treating physician made a diagnosis of heat stroke which was rampant during that week affecting primarily the elderly and the mentally ill.

There have been some reports of heat stroke deaths in patients on neuroleptics. A paper from Netherlands describes a similar phenomenon of fatal heat stroke in two patients, one on pimozide and clomipramine and the other on droperidol, promethazine and zuclopenthixol (Fijinheer et al., 1995). Rise in body temperature has been reported after clozapine therapy (Gaertner et al., 1989). This apart, the wandering behaviour of some of the schizophrenic patients with inadequate fluid intake could compound this problem, although this is not applicable to the case described. In torrid summers, we must be aware of the role of neuroleptics in temperature dysregulation, which makes the mentally ill more vulnerable to heat strokes. It may be necessary to take some precautionary measures before the advent of scorching summers to prevent recurrence of such events.

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