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## Epidemic Hysteria Masquerading as Food Poisoning

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Sirosis(1) reviewed 70 distinct outbreaks of epidemic hysteria from western and European literature during the past century. Of these nearly half (34) occurred in schools, whereas the rest appeared in varied settings and very rarely in hospitals. Women (80%), especially in closed settings mostly below 20 years, often adolescents were involved.

From India also such epidemics have been reported(2,3). But unlike those reported by Sirosis, these have occurred outside the school setting. Chandrashekar(4) reported an epidemic of possession in school setting.

### Subjects and Methods

The epidemic occurred on independence day, 1988, in Girls School, Ranikhet (U.P.). Few of the girl participants in the

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cultural programme developed giddiness fainting, nausea and pain abdomen after eating sweets (laddoos). This event passed off unnoticed and within an hour all of them recovered. Traditionally, cultural programme was followed by distribution of sweets among students. The distribution of sweets on that day was delayed and majority of students left after waiting for an hour. Rest of the girls collected sweets next day and within an hour few more girls had exactly similar symptoms. It included some girls who had taken the sweets on the previous day. Initially, five cases were brought to the local hospital and by evening the number increased to 52. The doctors in hospital suspected food poisoning. This caused panic among all students, staff and local people. It became worse with the attention of mass media and politicians. The next day school was closed. During the next 5 days, 300 cases were reported (all female except three). This included the relatives of students who shared sweets with them. They were between 7 to 21 years of age, except a 45-year-old woman.

On 22nd August, 28 cases which were considered serious were transferred to Medical College, Lucknow for detailed evaluation and treatment. Following admission, this epidemic got more attention of public and health administrators and even the Chief Minister paid a visit to the hospital. Following his visit all the cases showed a marked change for the worse so much so that they could not even recognize their parents, attendants, known visitors and became more violent and aggressive. Toxicological report of sweets and toxic analysis reports of urine, blood and gastric aspirates were normal. Most of them recovered within two weeks. Meanwhile, next batch of 36 cases was transferred to Lucknow. Some patients, who had recov-

ered, relapsed after 4-5 days. Of these, 14 cases were readmitted through casualty at our institution for suspected poisoning.

Clinical examination and investigations such as hemogram, ESR, X-ray chest and skull, EEG, ECG, CSF examination and culture, urine, stool, blood for culture and toxic analysis were normal.

Majority of patients complained pain over abdomen, nausea, headache, dizziness and fainting and pseudoseizure. On psychological examination, they were anxious and frightened; many of them believed that they were poisoned and would die. During hospital stay a hysterical fit in one patient was followed by fits in others. The children were separated. Each child was assessed and counselled individually (including their parents/attendants). This was done in two sessions. Within a few days, all of them recovered. Demographic profile and other parameters(5) of the patients are given in the *Table*.

### Discussion

All important leads for the diagnosis of epidemic psychogenic illness were present in this outbreak(6). Victims were mostly adolescent school girls from closed setting and superstitious background(1). The non-specific symptoms of first few girls might not be related to food poisoning but simply to fatigue, stress, overexcitement and hypoglycemia. All the cases attributed their illness to food-poisoning. In such an affect-laden situation, thinking is usually dominated by prevailing moods(7). The hysterical symptoms spread by seeing and hearing about attacks, wide publicity through media, speeches of local leaders, suggestibility, tendencies towards superstitious beliefs and the possibility of secondary gains like monetary compensation announced by the

TABLE—Socio-demographic Characteristics of Patients and IQ Scores

S.No.	Age	Sex	Education (Class)	Socio-economic status	Belief in demanopathy	*IQ
1.	14	F	9th	Poor	+	93
2.	14	F	7th	Poor	+	95
3.	17	F	11th	Poor	—	100
4.	15	F	9th	Middle	+	108
5.	11	F	7th	Poor	±	80
6.	16	M	9th	Middle	+	76 (Scatter)
7.	15	F	10th	Middle	±	82
8.	12½	F	6th	Middle	+	95 (Scatter)
9.	16	F	12th	Poor	+	87 (Scatter)
10.	15	F	10th	Poor	+	89 (Scatter)
11.	13	F	9th	Middle	—	86 (Scatter)
12.	14½	F	9th	Poor	+	88
13.	11	F	6th	Middle	±	82
14.	17	F	11th	Poor	+	89 (Scatter)

\* Inter test scatter indicating emotional instability.

Government, sympathy by parents, local people and teachers.

The individual characteristics of people affected in such outbreaks are still an unsettled question(1). In the present study IQs ranged from borderline to average, 43% patients had interest scatter, indicating some emotional disturbances. It is believed that epidemic hysteria occurs in a group including a large majority of normal persons, where the threshold affect for suggestibility plays a major part on account of regressive effect of crowd behavior on intellectual and emotional processes and a small minority of unstable or emotionally labile individuals which often can be found to gravitate around index cases. As per our finding on clinical interview, majority had suggestibility traits.

There are few accounts of similar outbreaks in literature. The Pollock of Clayton(8) described outbreak of fainting at three schools and considered them to be viral infections with hysterical overtones. Moss and McEvedy(9) described an outbreak in Blackburn affecting 118 girls at secondary school. The symptoms complained of were very similar to the reported study and, although aromatic hydrocarbons came under suspicion, it was eventually concluded that the illness was mainly hysterical.

The nature of epidemic was rebound outbreak type. A handful of cases appeared rapidly and in following days more number of people became symptomatic. The rebound outbreak type of epidemics usually last one to two months and involve more

than 30 persons. The rebound phenomena often appears when group is reassembled(1). This present outbreak is ideal for epidemiological(9) study, since it deals with large numbers, a good span of time, detectable peaks, the possibility of control cases and the higher probability of detecting index cases. The present study was an example of epidemic hysteria in its most complete manifestation.

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