ANALYSIS OF NORTH BENGAL KORO EPIDEMIC WITH THREE YEARS FOLLOW UP

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SUMMARY

An analysis of 1982-Koro Epidemic in North Bengal region (West Bengal State) is done. Post-epidemic Koro incidence in this region, up to a period of three years, is also reported. Analysis reveals that North Bengal Koro epidemic was comparatively of longer duration with definite characteristic epidemic typology.

Introduction

The review of the literature on psychiatric epidemics has shown that in addition to the absence of organic etiology, one other important feature which consistently characterized such epidemics is the benign morbidity with rapid spread and rapid remission (Knight et al. 1965, Sirois 1974). Gwee (1969) also observed this epidemic character of abrupt and precipitous rise and fall in Koro outbreaks. The largest Koro epidemic reported (Singapore) was also of three weeks duration (Ngui 1969). The North Bengal Koro epidemic took place in July 1982 and maintained thereafter not only for a lengthy time span but also showed a diffuse endemity in this region after the epidemic toll.

Material and Methods

1. Geography of North Bengal region: The North Bengal region is comprise of five districts (Malda, West-Dinajpore, Darjeeling, Jalpaiguri and Cooch-Bihar) of West Bengal State, divided by the river Ganges from the southern part of the State (Fig. 1). This region is very important from the cultural point of view, as this region is inhabited by diverse ethnic groups and this region has both national and international boundaries with other States and Countries. Darjeeling district, mainly a hilly district, occupies a special position in this region because of its cosmopolitan sub-divisional town Siliguri which is both commercial and geographical gateway to the whole of Eastern India.

2. Methodology: A total of 405 Koro cases (Male 357 and Female 48) was collected by different hospitals and community survey of the four districts (Darjeeling, Jalpaiguri, Cooch-Bihar and West-Dinajpore) of North Bengal, from July 1982 to the end of 1985, by the Koro Study Team.
78\% data were collected by direct case interview within 1-12 weeks of the onset and the remaining case reports were collected through different community informers of the study team. The details of the socio-demographic features and clinical profile of the cases are reported elsewhere (Chowdhury et al. 1984, Chowdhury 1984 a, b).

**Results**

Out of 405 Koro cases, male constituted 88\% and female 12\% (Table 1). Highest number of cases (total) was reported from the Darjeeling district (40.9\%). Male affectivity was also highest in this district (43.41\%) and that of female affectivity was in the Cooch-Bihar district (58.33\%).

Fig. 2 shows the calendar-month distribution of the cases. Total highest percentage (41.12) and highest male affectivity (38.07\%) was reported from the Darjeeling district. Cooch-Bihar was in the second highest position (30.09\%) with highest female affectivity (7.11\%).

18.53\% cases of the total was from the Jalpaiguri and 1.27\% from the West-Dinajpore district.

The highest toll of the epidemic was observed throughout the month of July (82.23\% of total cases). The third week of July specially showed maximum number of cases, both sex-wise (Male 43.06\%, Female 41.67\%) and in total number (48.89\%). The month of August showed a
precipitous fall of this number to 4.31% only, followed by a small peak (9.64%) in September and then followed an abrupt fall.

In the Darjeeling district the first case was reported at the Siliguri sub-divisional hospital at 2 am of 9th July '82. The third week toll was the highest (37.65%) and by the fourth week 83.95% of total cases of this district was reported. This was followed by an abrupt fall to 4.32% in August, while in September there was a little rise (8.02%) and again followed by a fall of 1.23% by November.

Identification of the first case in the Cooch-Bihar district was uncertain. Most probably on 12th of July the outbreak started from the village ‘Mohischaru’ under Mathabhanga police station. The third week toll was the highest, both in total number (62.34%) and sex-wise. By the end of July almost 77.92% cases was reported followed by a sharp fall of new onset to 3.90% in August. In September a new wave with an epidemic peak (14.29%) was observed.

The first case in Jalpaiguri district was supposed to be from the village Bagaribari under Dhupguri police station in the first part of the first week of July and rapidly spread to the close-by district town Jalpaiguri and scored the highest toll (50.68%) during this week. By the fourth week of July the new onset dropped down to 2.74%. The first case of West-Dinajpore district was reported in the month of September from a semi-industrial colony (of Oil India Corporation) at Dhumdangi.

Table 2 shows the district-wise distribution of cases during the post-epidemic years (1983-1985). A total of 10 cases (all were male) was reported. In 1983, 6 cases; in 1984, 3 and in 1985 one new case report was collected.

### Table 2

| Districts      | Feb | July | Aug | Sept | Oct | May | July | Oct | Mar | Total |
|----------------|-----|------|-----|------|-----|-----|------|-----|-----|-------|
| Darjeeling     | 1   | 1    | 1   | 3    |     |     |      |     |     |       |
| Cooch-Bihar    | 2   | 1    |     | 3    |     |     |      |     |     |       |
| Jalpaiguri     | 1   | 1    | 1   | 3    |     |     |      |     |     |       |
| West-Dinajpore |     | 2    |     | 1    |     |     |      |     |     |       |
| Total          | 6   | 3    | 1   | 1    |     |     |      |     |     | 10    |

*All cases were male.

Discussion

The calendar-month distribution of 1982 Koro epidemic of North Bengal showed some interesting character. The whole outbreak could be divided into the following epidemic types :

1. **Sudden-onset Explosive Type**: The typical characteristic here is the rapid appearance of symptoms, involving many people at a time within the same locality. The outbreak displayed a sharp rise followed by a sharp fall. The Jalpaiguri Koro epidemic is a typical example of this type.

2. **Explosive type with an identifiable Prodormal Phase**: There is a general build-up of illness-tension in the locality—one after another cases appear in a relay system. The epidemic character in the second week of July in Cooch-Bihar is suggestive of this type.

3. **Rebound Outbreak**: Quite a few number of cases here appear rapidly in close succession when the massive trend of the epidemic as such is waning. September peak here is suggestive of this type. Only Darjeeling and Cooch-Bihar epidemic showed this peak.

The time span of the North Bengal Koro epidemic is relatively longer than the
other reported such epidemics (Ngui 1969, Suwanlert and Coates 1978). There may be many possible reasons for that. The North Bengal region covers a wide geographical area. Adequate information (about the nature of the illness) is needed to dissipate the panic (of the illness) to mobilize the vulnerable groups and thus the wider the area of epidemicity wider would be its time course. It is also an important point to remember that the Koro epidemic of lower Assam took place from mid-June to 11th September 1982 (Dutta et al. 1982). As this area is adjacent to North Bengal (Jalpaiguri and Cooch-Bihar), so the different routes of social transmission of Koro-panic impulse may be a further factor for the longer duration or for the later peaks of the Koro epidemic in this region.

The intra-district epidemic route of this Koro outbreak also deserves some notice. In the Darjeeling district, the first epidemic nucleus was at the town from where subsequently it coursed into the villages. The picture in the Jalpaiguri and Cooch-Bihar district is just the opposite, the outbreak was first in the villages from where it spread into the towns. Further study of social psychodynamics of these respective population may throw light on this city to village and village to city epidemic routes.

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