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EPIDEMIC SMALLPOX IN A RURAL DISTRICT (SANTHAL PARGANAS)

by

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Introduction

Bihar State, the second largest state in India with a population of 60 million, is divided into 5 divisions and 19 districts. Santhal Parganas District is in Bhagalpur Division and is located in the southeastern part of Bihar and borders West Bengal. The district has a population of over 3 000 000 persons spread over an area of 5 500 square miles. Sixty percent of the population are tribal groups that live in the rural areas. Forty percent of the country side is hilly or mountainous with dense forests; 50% is uneven, rolling country with rocks and forests and only about 10% is comprised of scattered plains created by the cutting forests. The district economy is based on small agriculture and a few mines of coal, china-clay and low grade mica. It has one important hydroelectric project that supplies power to Dumka and 10% of the district. The administrative headquarter of the District is Dumka, a town of 25 000 people located about 300 kilometres from Calcutta. Dumka is approached only by road, its nearest railway link being 42 miles away.

Santhal Parganas has 6 subdivisions with 41 blocks, with one Medical Officer in each block and one Subdivisional Hospital in each subdivision, staffed by a number of doctors, besides some state and local dispensaries with doctors.

Roughly 3 000 square miles are hilly tracks which are called Damin-I-Koh, meaning "skirts of hills." There are 10 Damin-I-Koh blocks and the inhabitants are called Paharias. They have a language of their own and reside on the top of the dense forest hills in poorly built thatched houses and all members of one family reside in one room. The Paharia blocks are as follows:-

Subdivisions	Blocks
1. Dumka	Gopikandar, Kathikund, Shikaripara
2. Pakur	Litipara, Amrapara
3. Sahibganj	Borio, Barhait, Taljhari
4. Godda	Sundarpahari, Boarijore

In the District, there are few roads and many are damaged. Most villages

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must be approached on footpaths covering uneven, hilly, mountainous, rocky areas with forests and rivuleta. Additionally, the district is engulfed almost every year by natural calamities such as flood and famine, often with epidemics of cholera and gastroenteritis. With these problems and a population which remains always below the poverty line, it can well be imagined how difficult it is to implement a health programme.

Socio-economic conditions

Santhal Parganas is inhabited predominantly by Santhals and Paharias. The Paharias, as mentioned above, reside in small scattered villages at the tops of hills amidst dense forests and their homes are difficult to approach. On being approached the Paharias, both young and old, usually become suspicious and run away into the jungles and hide themselves. The Paharias have their own language and the Santhals speak Santhali. Both are very simple and superstitious people and are guided more by 'herd instinct'. In the not too distant past, Paharias even used to kill persons visiting them.

As a group, they are resistant to our vaccination programme. Smallpox is considered to be a curse inflicted by the 'Goddess Mata'. They prefer to please their Goddess by offering Pujas etc. through 'Ohjas' than to be protected by smallpox vaccination. They believe in nature and lead a more or less happy-go-lucky life with innumerable frolics and functions where they assemble and mix in thousands even if ill with smallpox.

Dumka and Deoghar subdivisions are the two most endemic areas of the district. Deoghar subdivision is composed predominantly of Hindus and Muslims, with only scattered Santhal villages. Dumka subdivision is predominantly tribal with scattered villages that have a mixed Hindu and tribal population. Source finding is difficult due to the fact that most of the investigators and vaccinators are not tribals and do not speak the local language. Epidemic control measures are hindered by resistance to vaccination even in the face of a smallpox outbreak. Even educated non-tribal Hindus and Muslims refuse vaccination for 10 days after a fresh case of smallpox occurs in their household. They worship Goddess Mata (Pox) with Parasad for distribution, believing that any vaccination given to contacts during this period will enrage 'Pox Mata' with dire consequences. I believe that most of the local Indian population has some such notion as this and even intellectuals think that any disease is a curse as a result of some misdeeds of past life.

But here we are concerned to carry out our programme and it is for you to advise and guide us. It is easy to break an idealogy but very difficult to break a religious idealogy.

I have a few suggestions, as follows:-

Difficulties and suggestions

1. People do not report cases of smallpox for two reasons: 1) they believe the disease is a curse of the Goddess Mata, and 2) people do not report any other diseases as they are not required to do so.

To ensure prompt reporting, some suitable measures must be taken and, for this, the whole local administrative machinery needs to be geared up.

2. The vaccinators should be on fifty-fifty basis, i.e. 50% Santhal and tribal and 50% non-Santhals. Persuasion of the population will be most effective if done in their own language. This will also help our investigation and control measures as the tribal vaccinators can easily mix with the tribal people and even stay overnight. With this in mind, some tribal people have been appointed but to make it more effective the above mentioned ratio should be kept.

3. For surveillance - having seen very good results when a reward is given to persons for first reporting of a case of smallpox (as was tried by the WHO epidemiologist), I suggest some suitable funds be made available to give rewards at least during the period of the epidemic.

4. In normal times, it is the duty of the vaccinators to perform both primary and revaccination but here I suggest, if possible, that some incentive money, say Rs 1, be given to the person taking primary vaccination, in a manner such as is done in the Family Planning programme. Money incurred for this is worthwhile and the amount is not great for an institution like WHO.

5. Posting of staff - in normal periods and for non-hilly areas, one vaccinator is required for a population of 20 000. But here, under epidemic conditions for rough, rocky and scattered villages, one vaccinator for 10 000 population is required.

6. Sanction of at least Rs 10 000 per vehicle per annum should be given. The present sum of Rs 3 000 per vehicle is inadequate.

7. Two more epidemic doctors should be posted with two new vehicles in addition to the present vehicle to meet the epidemic situation.

8. Sanction of adequate funds in T.A. for Unit Medical Officer, P.M.A. and others. The present allotment of Rs 3 498 should be raised to Rs 10 000 at least and the fixed T.A. of enumerators and vaccinators should be increased to Rs 30 and Rs 20 per month respectively - the present being Rs 15 and Rs. 7.50, respectively

9. Funds should be provided to repair all old cycles that were given for use to all P.M.A.s, enumerators and vaccinators, etc., costing about Rs 25 000.

10. One Health Educator for this district should be sanctioned for propaganda and mass health education.

11. Two refrigerators for storing vaccine should be provided.

12. Rs 100 should be given to the Unit Medical Officer Smallpox, as special pay, as was given previously.