be coincidental and not necessarily have a causal relationship. Hence, a thorough attempt should have been made to exclude congenital infection or an acquired disseminated form of the disease before labelling it as BCG induced.

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Reply

As already mentioned in the report there was no evidence of close contact with an open case of tuberculosis.

BCG given high on the tip of shoulder gives rise to enlargement of infra-clavicular nodes or those in the anterior triangle of the neck(l). In this patient, BCG was given just 2.5 cm below the acromion tip, indicating a higher site than the routine.

Indetification of BCG organisms requires special techniques available only in reference laboratory. All possible investigations were done to arrive at diagnosis and it may not be possible to follow gold standard in every case due to lack of facilities.

Patients with leukocyte and monocyte deficiencies may also show miliary granuloma composed of mononuclear, plasma and giant cells(2); therefore, presence of granuloma does not rule out immunodeficiency. Chemotherapy in such. children against mycobacteria or other organisms will have a transient or little effect(2). This patient's immune deficiency could not be categorized with available facilities.

Taking into account the course of events after BCG vaccination, absence of source of contact and lack of response to treatment in the form of progressive lymph node enlargement, persistent fever, and poor feeding, we feel it is a case of generalized BCG tuberculosis. Categorization of immune deficiency and identification of BCG organisms was not possible due to non availability of laboratory services.

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Neonatal Tetanus Despite Antenatal Immunization

Occurrence of neonatal tetanus despite antenatal immunization is unfortunate. Nineteen such cases were admitted in the Department of Pediatrics, Maulana Azad Medical College and associated LNJPN Hospital, New Delhi between October 1992 to October. 1993. Three cases were from Delhi slums, the rest were from rural Western D.P. adjoining Delhi. In 13 cases, the mothers were immunized between 5th and 8th months of pregnancy. Four of these cases died. In the other 6 cases, the mothers had received only one dose of tetanus toxoid during pregnancy between 8th and 9th months. Three of these cases died.

Occurrence of neonatal tetanus despite maternal immunization with tetanus toxoid has been reported earlier(1-4). Loss of potency of the vaccine due to improper storage has been thought to be the cause of the vaccine failure. We feel that the improper timing of the immunization, *i.e.,* after the first trimester, may be an equally important cause of it. A similar observation was also made by Deivanayagam *et al.(4).* Immunization of the mother in the second or third trimester of pregnancy may not be effective in conferring adequate protective immunity. Giving one dose of tetanus toxoid as primary immunization also may not do any good.

The mortality of tetanus neonatorum in our country is still very high, and most of the cases occur in rural areas and disadvantaged localities in urban areas. Reducing the incidence of neonatal tetanus through antenatal immunization of mother with tetanus toxoid is an effective way of overcoming the problem. This strategy has rightly been adopted in our national immunization programme. However, delayed antenatal immunization and denatured vaccine will hamper the' success of the immunization programme. Timely antenatal immunization may be hindered by ignorance and apprehension on the part of the mother(3) and non-reporting of pregnancy in the first trimester. We feel that there is need of strengthening the strategies for proper storage of vaccine at every level and antenatal immunization with tetanus toxoid right in the first trimester of pregnancy in order to prevent failure of maternal immunization. Education and motivation of the prospective mothers about prevention of neonatal tetanus will improve the first trimester immunization with tetanus toxoid.

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