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Agenesis of Frontal Bone

Developmental defects of the skull are rarely seen. They are usually without clinical sequelae yet at times associated with intracranial pathology incompatible with life(1). We report a case of frontal bone agenesis.

This was a five-year-old male child presenting in outdoor with pulpiness of the front of the skull since birth. There was no contributory point in antenatal history and delivery. Subsequent milestones were also normal. Examination revealed loss of frontal bossing and the whole forehead area was pulpy. Head circumference and chest circumference were 49.5 and 53.0 cm, respectively. The child was normal otherwise and did not show any sign of growth or developmental retardation. There was no neurological deficit. *X*-ray skull revealed agenesis of frontal bone (*Fig.*).

Frontal bone constantly develops from two symmetrical halves(2). It is invariably agreed that ossification of frontal bone takes place from two primary centres which appear in the membrane between 40th and 50th day of intra-uterine life(2). They are sited in the position of the future frontal eminences. Failure of these ossification centres to develop probably accounts for the agenesis of the whole

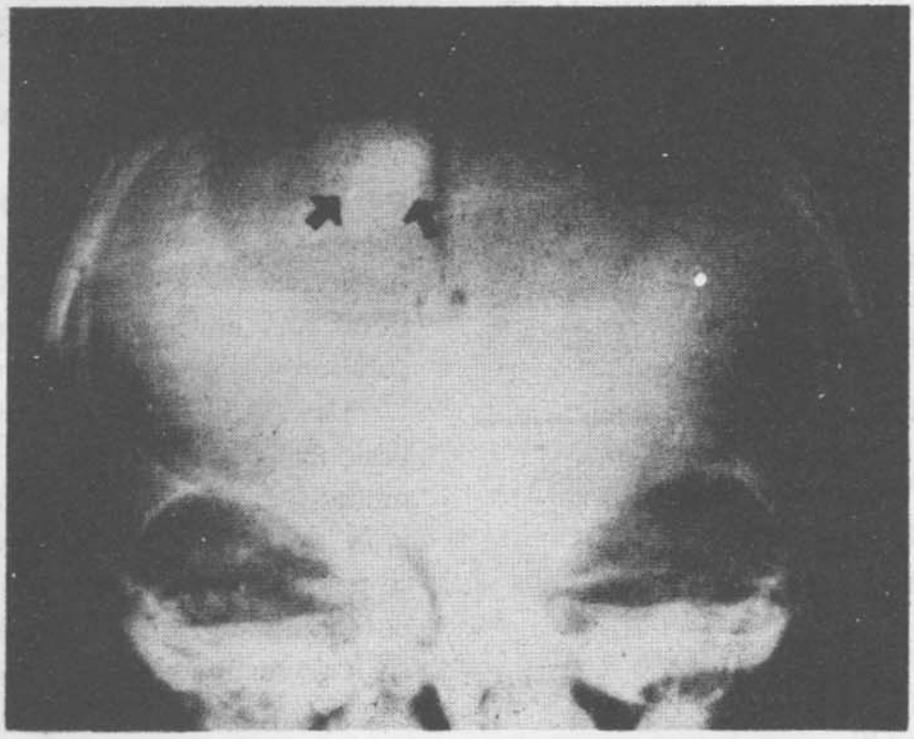

Fig. X-ray skull showing agenesis of the frontal bone. Primary centre of ossification has developed on the right side (arrow mark) but not on left side. There is complete absence of primary and secondary tuberculosis on both sides.

bone. In the present case, the ossification centre developed on the right side (arrow mark) but ossification did not progress beyond that. On the left side ossification centre did not develop at all thereby giving picture of agenesis. Absence of neurological symptoms could have been because of shielding effect of dura(3). A thorough screening of the literature suggests paucity of such a case.

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Fumigation of Neonatal Nursery: How Effective in Reducing the Environmental Pathogens ?

The inanimate environment of a neonatal unit is full of pathogenic bacteria which may cause nosocomial infections in upto 12 to 25% of patients(1). The present study carried out at the Departments of Pediatrics and Microbiology, Dr. S.N. Medical College, Jodhpur aims to find out the extent of contamination of the floor and air of a neonatal unit and effect of cleaning and fumigation on these pathogens. The study was carried out in two parts, first was after a routine cleaning but before fumigation and second part just after fumigation.

The bacteriological air sampling was done by Agar Sampler Plates (ASP) using 15 cm diameter settle plates of nutrient agar and exposed for 8 hours to the air. The method depends on the deposition of bacteria carrying particles settling on sq m of medium per minute = number of such particles per 0.3 cubic meter space(2).

The floor of neonatal nursery was sampled by Rhodac plate method where 2×2 cm glass plates with overlaid nutrient agar were used. These plates were pressed firmly over the floor under study and later they were incubated at 37°C for 24 h and colony count was done(3). The floor was cleaned with 4% phenol solution kept in a clean bucket (10 litre). A wet mop cloth was used and after cleaning a part of neonatal unit, the cloth was rinsed and cleaned in the bucket and reused till 100 sq ft of floor was covered and then the phenol solution was prepared again.

The fumigation of neonatal unit was done using formalin (34 to 38%) vaporizer method using 1 litre per 1000 cubic feet area. A basin of liquid ammonia was used to neutralize the excess formaldehyde and paraformaldehyde in the unit(4).

The results of bacteriological air study showed that the counts initially ranged from 218 to 426 bacteria/cu m but were reduced to 32 to 64 bacteria/cu m after fumigation achieving a reduction of 78 to 92%. The hospital air shows levels of