

## Persistent Metopic Suture: a case reported from North East India

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### Abstract

Metopic suture is a kind of dentate suture extending from the nasion to the anterior angle of the bregma. Metopism is the condition where, persistence of metopic suture completely extends from nasion to bregma. Metopic suture usually obliterates by 2 years, but it has been reported to take up to seven years to fuse.

Examination of skeletal remains of a twelve-year-old girl shows obliteration two halves of the frontal bone in the skull. Dental examination shows presence of total 14 teeth in the upper jaw, including two 2<sup>nd</sup> molars on each side.

Metopism at times may confusing during radiological examination of skull, as it may be misdiagnosed as fracture of skull bone.

**Keywords:** Death Certificate on Cause of Clinical Death; Cause of Death.

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### Introduction

Metopic suture is a kind of dentate suture extending from the nasion to the anterior angle of the bregma. Metopism is the condition where, persistence of metopic suture completely extends from nasion to bregma (1). Metopic suture usually obliterates by 2 years (2), but it has been reported to take up to seven years to fuse (3).

A twelve-year-old girl was missing for 2-3 months and skeletal remains were found in a pond in the village where she was residing. Relatives identified the dead body from remaining wearing garments attached to the body. Examination of the skull bone shows non obliteration two halves of the frontal bone (Image I). Dental examination shows presence of total 14 teeth in the upper jaw, including two 2<sup>nd</sup> molars, one on each side (Image II).

### Discussion

Dental examination of this case shows that her age is more than 12 years (second molar is appeared, age of appearance 12-14 years) (4), and Metopic suture is not yet obliterated. From the findings it can be opined that, it is a case persistent Metopic suture or metopism.

Presence of metopism was once believed as a sign of intelligence because its presence related to growth of frontal lobes of brain as incidence was more in superior races and, rare in inferior races (5).



Fig.1. Persistent Metopic suture

Del Sol suggested that metopism can be related to abnormal growth of the cranial bones, hydrocephalus, heredity, or atavism (6). The genetic factor is the one currently accepted by

most scientists (7). Metopism is found in approximately 5% of Asians and 9% of European Caucasians and 1% of Blacks (8) (9). Bergman reported the persistence of the metopic suture in approximately 1-12% of skulls (9). Krogman in his book on “*The Human Skeleton in Forensic Medicine*” stated that, metopism is more frequent among whites and Mongoloids (about 10%) than among Negroids (about 2%) (2).



Fig.2. : Eruption of 2<sup>nd</sup> molar teeth

Medico-legal importance: metopism can be confused with fracture of the skull during radiological examination of skull. It also helps at times in estimation of age.

#### Conflict of Interest

None declared

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