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### Incidence and Variation of Interpretably Bone (Os Incae) in Northeastern Thailand

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#### Abstract

**Background:** The squamous segment of occipital bone consists of cartilaginous and membranous origin. The cartilaginous part develops to supra occipital bone. The membranous part has three primary ossification centers on each side. The first pair ossification center lies above the cartilaginous part between the superior nuchal line and the highest nuchal line and fuse with the cartilaginous part to form a supra-occipital segment of occipital bone. The second and third pairs have two nuclei each forming lateral and medial plates. All of these ossification centers fuse to form squamous segments of occipital bone. The fusion failure between ossification centers of second and third pair nuclei with each other or supra-occipital segment causes separated bone(s) called interparietal bone(s) or os incae. The interparietal bone should be differentiated from Wormian (intrasutural) bone. The incidence from various studies ranges from 0.37% to 9.50% of the population.

**Objective:** To study the incidence and variation of interparietal bone in Northeastern Thailand as compared with other studies.

**Material and Method:** A total of 400 Thai native skulls (276 male and 124 female) from the collection of Anatomical Museum of the Faculty of Medicine Khon Kaen University aged from 16 to 93 years old were examined by naked eye and photographed. Wormian bone was excluded by shape and site. The statistical method used was percentage of relative frequency.

**Results:** The incidence of interparietal bone in Northeastern Thailand is 7.25% (29 from 400). Males have a two times higher incidence rate than females, (8.33% versus 4.84%). Eleven patterns of interparietal bone were found. Fusion failure of a third pair ossification center is more common than second pair.

**Conclusion:** Knowledge of interparietal bone is useful for neurosurgeons and radiologists to avoid missed diagnosis of skull fracture. Presented interparietal bone may cause difficulty in surgery of occipital and parietal bone. Forensic scientist can use interparietal bone for personal identification.

**Keywords:** Interparietal bone, Os incae, Thailand

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