Occipital Fracture or Mendosal Suture?: Case Report

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Abstract
In children plane film radiographies are still most cost-effective method in evaluating skull fractures but sometimes its difficult to differentiate sutures or vascular groves from fractures. Accessory sutures, such as the mendosal suture, may be misinterpreted as a skull fracture if additional views are not obtained.

Keywords: Mendosal suture; Occipital fracture; Forensic science

Case Report
A 8 month old boy presented with soft tissue swelling after a fall. Plain radiographs showed sharp lucencies in the parietal and occipital bones that were told to represent fractures. CT examination with 3D reconstructions was performed and showed a vertically well defined lucency at right parietal bone and 8 mm epidural hematoma. Occipital lucency in lateral craniography that simulated skull fracture was mendosal suture (Figures 1-3).

Discussion
The mendosal suture is an accessory suture located between supraoccipital and interparietal bones. The time of closure of this suture in children changes from intrauterine period till 10 years of age [1-3]. The mendosal suture is usually bilateral, symmetrical that shows sclerotic margins and interdigitated pattern [4,5]. However skull fractures are sharp lucencies with nonsclerotic edges. Soft tissue swelling or subgaleal hematoma is frequently associated with skull fractures.

Conclusion
In summary differentiation between fractures and accessory sutures is made by knowledge of the normal anatomy and timing of sutural closure especially in occipital region.

References

Figure 1: A plain lateral radiograph showed a sharp lucency in right parietal bone (red arrow) representing a calvarial fracture and an occipital lucency that was mistaken for a fracture (white arrow).

Figure 2: 3D CT showed bilateral symmetric interdigitated pattern of mendosal suture (arrows).

Figure 3: That is linear sharp lucency in right parietal bone accompanied by soft tissue swelling and epidural hematoma.

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