

# ***DIASTASIS OF ZYGOMATICOTEMPORAL SUTURE - AN UNDENIABLY UNIQUE FINDING***

Leema RK, Ravindra SV\*, Bhuvaneshwari LK, Shiva B, C. Sowmeshwari, Navya AS

Department of Oral Medicine and Radiology, MNR Dental College and Hospital Sangareddy, India

\*Corresponding author

Dr. Ravindra SV

Professor and HOD

Department of Oral Medicine and Radiology,

MNR Dental College and Hospital Sangareddy, India

Email id:drravindrasetru@gmail.com

## ***ABSTRACT:***

A key objective of this case presentation is to share information and raise awareness about the zygomaticotemporal sutural diastasis, which can be mistaken as a fracture. The most commonly reported diastasis is of lambdoid and coronal sutures, but in this case, we describe a more intriguing zygomaticotemporal diastasis. Typically, diastasis is caused by trauma or pathology, but in this case report, we describe a non-traumatic diastasis of the zygomaticotemporal suture.

Keywords: Zygomaticotemporal suture; Diastasis; Fracture

## ***CASE REPORT:***

Diastasis is an abnormal widening of the skull sutures that occurs physiologically during a newborn's growth spurt. Zygomaticotemporal suture/Temporozygomatic suture is located between the temporal protrusions of the zygomatic bone and the zygomatic protrusions of the temporal bone. We present a case of non-traumatic diastasis of the zygomaticotemporal suture that was noted as an incidental finding.

A 24-year-old male presented to our department with the chief complaint of irregularly placed teeth in the lower arch for the past 4 years. There was a significant discrepancy in the jaws with severe malocclusion observed on extra-oral and intra-oral examinations. To reposition the jaws or dentoalveolar segments, orthognathic surgery was planned for this patient. For the generation of a patient 3D virtual anatomic model including the soft tissue mask of the facial, underlying bone of the mask, and for proper planning treatment of teeth, the patient was advised to undergo CBCT imaging.

Upon exploring the CBCT data, we noticed the existence of an identifiable zygomaticotemporal suture (Figures 1 and 2) with shortened and bowed zygomatic process of the temporal bone on the right side, which is not usually visible radiographically unless the suture has separated due to a traumatic event. Initially, it was suspected to be a right zygomatic arch fracture as it mimicked the features of a fracture.



Figure 1



Figure 2

As there was no trauma history in this patient, the cause of the zygomaticotemporal suture diastasis remains a mystery. When there is a focal impact on the young skull, tension is created at the suture line, which opens the feebler seam in-between the bones and causes a diastasis, and the energy from the blow is capable of dispersing effortlessly along the exposed sutures of a young skull without showing any obvious fracture lines. There is usually an accelerated growth of the sutural connective tissue in non-traumatic cases without or with defective physiological ossification.<sup>1, 2, 3.</sup>

**CONCLUSION:**

In this patient, zygomaticotemporal sutural diastasis would have been caused by delayed ossification. We believe that this patient requires no treatment for this condition since ossification will improve over time and the sutural width will narrow with age.

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