Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Radiology

Langenbeck's Disease: A Case Report

C. JEDDI[1*], H. JAOUDY[1], B. Boutakioute[1], M. Ouali Idrissi[1], N. Cherif Idrissi Gannouni[1]

[1]Department of Radiology, Hospital AR-RAZI, University Hospital Center Mohammed VI, Marrakech, Morocco

DOI: https://doi.org/10.36347/sjmcr.2024.v12i10.028 | **Received:** 28.08.2024 | **Accepted:** 05.10.2024 | **Published:** 10.10.2024

***Corresponding author:** C. JEDDI
Department of Radiology, Hospital AR-RAZI, University Hospital Center Mohammed VI, Marrakech, Morocco

Abstract **Case Report**

Bilateral hyperplasia of the coronoid processes, or Langenbeck's disease, is a rare condition characterized by a painless limitation of mouth opening.

Keywords: Coronoid processes, Hyperplasia, 3D CT.

INTRODUCTION

Langenbeck's disease is a rare condition that leads to a permanent constriction of the jaws. It is characterized by bilateral hypertrophy of the coronoid processes, which come into contact with the zygomatic bone during mouth opening. This condition should be distinguished from Jacob's disease, which involves hyperostosis of the posterior aspect of the zygomatic bone [1].

This case report describes the incidental diagnosis of Langenbeck's disease.

CASE

This is the case of a 40-year-old adult initially referred by the emergency physician for facial trauma. Upon questioning, the patient reported an unexplained limitation of mouth opening for the past 3 years, associated with pain and joint noises in the temporomandibular joints. Mouth opening was estimated at 19 mm.

He underwent a 3D CT scan, which showed bilateral hypertrophy of the coronoid processes, impeding mouth opening (figure 1 and 2).

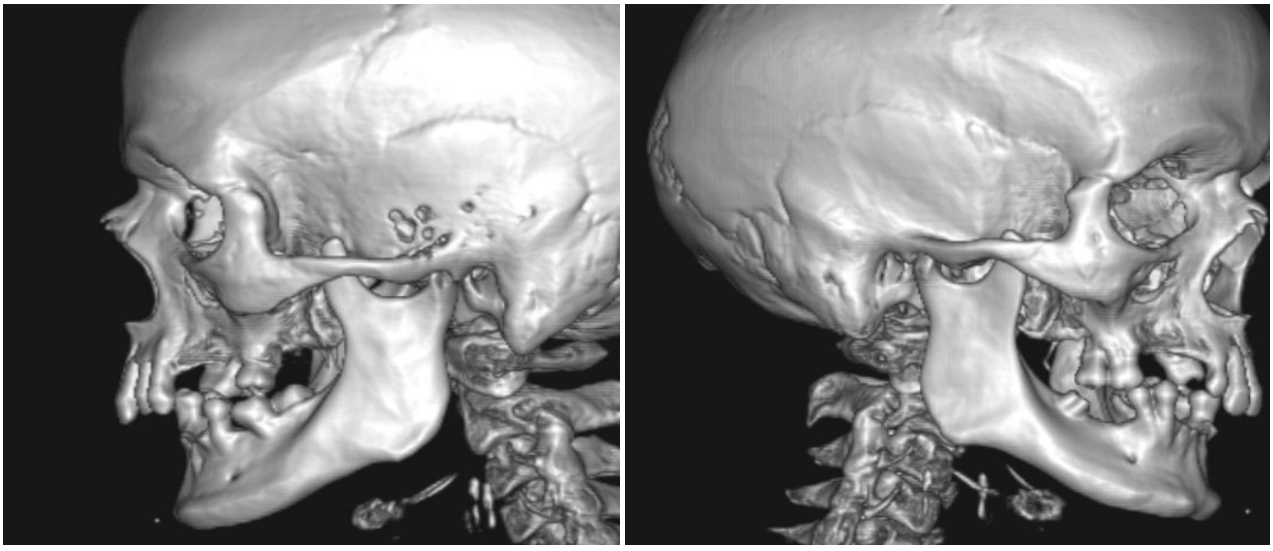

Figure 1: 3D CT: bilateral hyperplasia of the coronoid processes with contact with the zygomatic bone. a) right side; b) left side

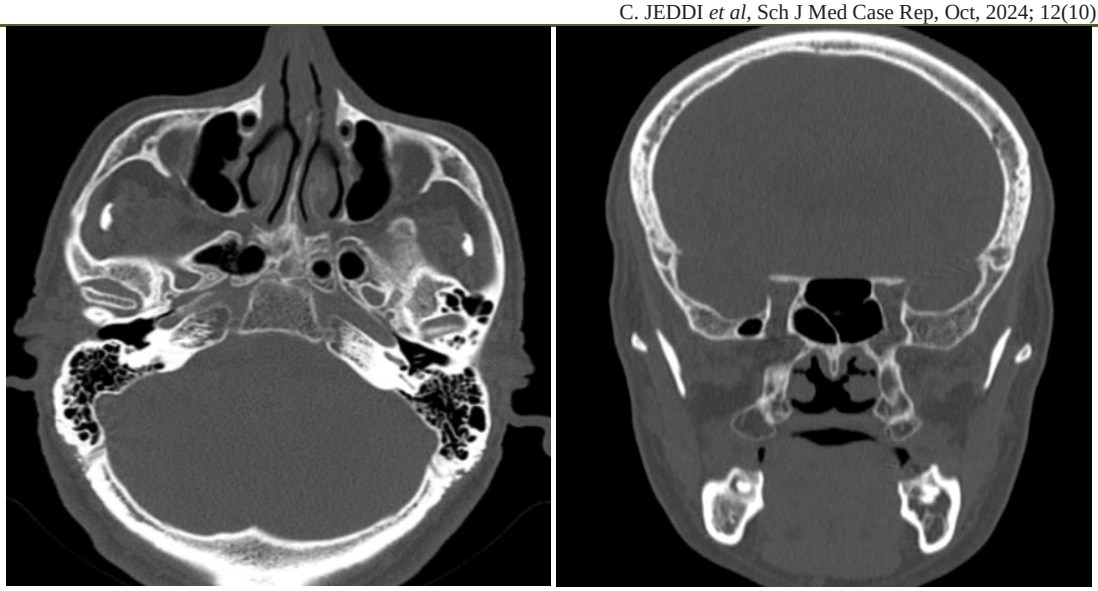

Figure 2: Computed tomography (CT): coronal and axial plans scan revealed bilateral hyperplasia of the coronoid processes

DISCUSSION

Hypertrophy of the coronoid processes, whether unilateral or bilateral, is an uncommon cause of restricted mouth opening. Tavassol *et al.*, indicate that the typical measurement of a coronoid process on a CT scan is approximately 13.02 mm in adults and 12.43 mm in adolescents [2]. The exact etiology remains unclear, but potential causes include hyperactivity of the temporal muscles, endocrine disorders, genetic anomalies, or chronic disc displacements [3].

While the OPT may suggest the diagnosis, a CT scan with 3D reconstruction is essential for a definitive diagnosis. MRI of the TMJs, often employed for initial evaluation, is not appropriate for this diagnosis since the coronoid processes are outside the imaging planes of this modality.

An analysis of the literature identifies two distinct types of coronoid process elongation. Jacob's disease is considered a rare condition characterized by the formation of a joint between an enlarged mandibular coronoid process and the inner surface of the zygomatic body. Most cases are unilateral, leading to facial asymmetry with deviation toward the affected side [4].

The second entity, as outlined in this case, involves elongation of the coronoid process without any associated bony abnormalities. Commonly referred to as Langenbeck's disease, it is usually bilateral.

Although around 80 cases have been documented, the actual incidence is likely much higher, as the absence of pain often results in a lack of medical consultation.

3D CT and histological analysis enable the differentiation of the various types of coronoid process hyperplasia. The preferred treatment is coronoidectomy, accompanied by postoperative maxillofacial physical therapy, with recurrence being rare [5].

CONCLUSION

The uncommon nature and limited understanding of this condition frequently result in diagnostic delays. Hyperplasia of the coronoid processes may not be evident on a panoramic radiograph, making diagnosis easier with CT scans that include 3D reconstruction.

REFERENCES

1. Canonica, M., & Princ, G. (2015). Une limitation de l'ouverture buccale inexpliquée: la maladie de Langenbeck. *63ème Congrès de la SFCO*, 02026.
2. Tavassol, F., Spalthoff, S., Essig, H., Bredt, M., Gellrich, N. C., & Kokemüller, H. (2012). Elongated coronoid process: CT-based quantitative analysis of the coronoid process and review of literature. *International journal of oral and maxillofacial surgery*, *41*(3), 331-338.
3. Coll-Anglada, M., Acero-Sanz, J., Vila-Masana, I., Navarro-Cuéllar, C., Ochandiano-Caycoia, S., & López de-Atalaya, J. (2011). Jacob's disease secondary to coronoid process osteochondroma. *Med Oral Patol Oral Cir Bucal*, *16*, e708-710.
4. Capote, A., Rodríguez, F. J., Blasco, A., & Muñoz, M. F. (2005). Jacob's disease associated with temporomandibular joint dysfunction: a case report. *Medicina oral, patologia oral y cirugia bucal*, *10*(3), 210-214.
5. Canonica, M., Lesclous, P., Kimakhe, S., & Princ, G. (2016). L'hyperplasie bilatérale des processus coronoïdes (maladie de Langenbeck): à propos d'un cas. *Médecine Buccale Chirurgie Buccale*, *22*(4), 337-340.