

## Abstract

Post-traumatic bilateral facial nerve palsy is a rare but debilitating condition with significant psychological and aesthetic consequences. Early diagnosis and management are crucial to improving functional outcomes and minimizing long-term complications."

## Aim of the study

The present case report aims to highlight clinical presentation, imaging characteristics, and different treatment modalities to ensure optimal functional recovery.

## Materials and Methods

We report a case of a 27-year-old man diagnosed with post-traumatic bilateral facial palsy: clinical presentation and treatment.

## Resultats

- **Patient:** 27-year-old man with no significant past medical history
- **Incident:** Motorcycle collision resulting in traumatic brain injury (TBI)
- **Initial Findings:** Head CT: 11-mm left temporal extradural hematoma, multiple skull fractures, bilateral temporal fractures
- **Follow-Up (5 days post-accident):**

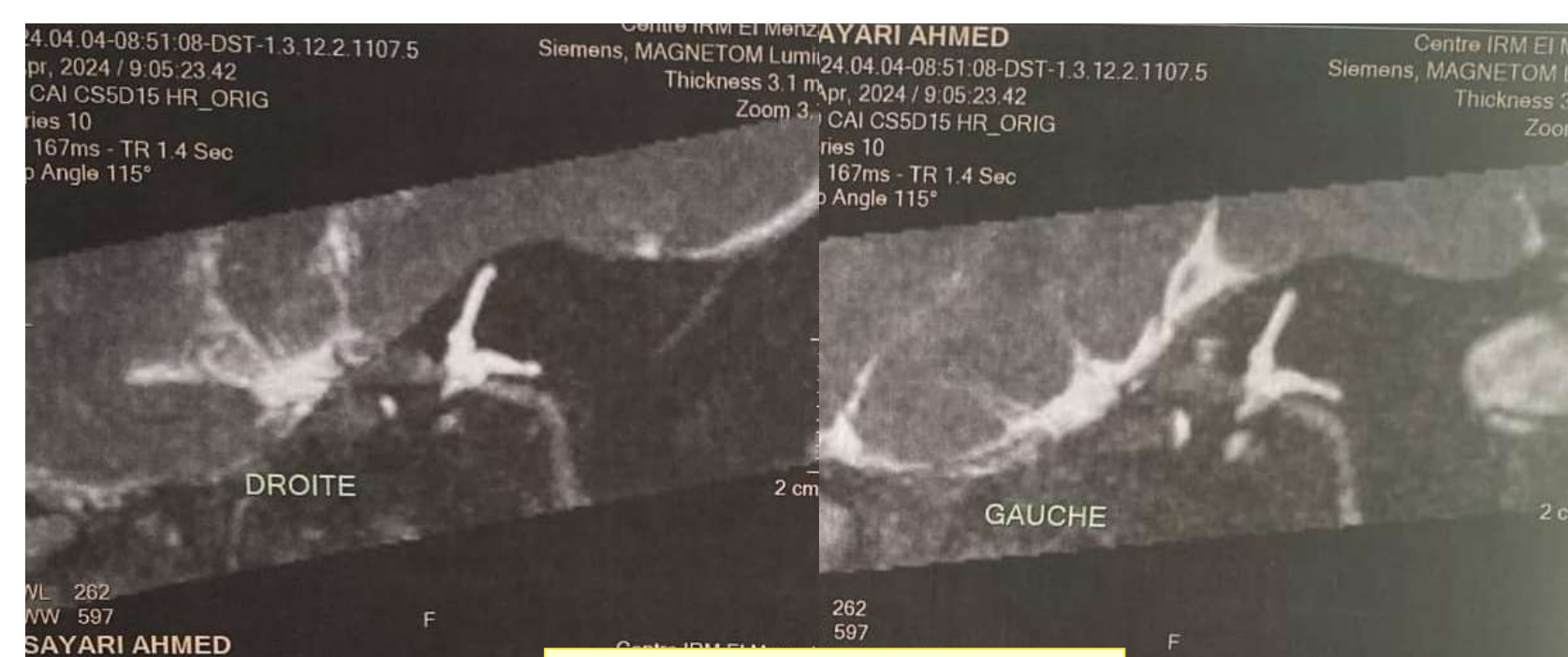
• **Symptoms:** Dizziness, right tinnitus, difficulty talking, difficulty showing facial expressions

### ENT Examination:

- **Left ear:** Normal tympanum, patent ear canal
- **Right ear:** Otorrhagia sequelae, stenotic canal, hemotympanum
- **Bilateral facial diplegia :**

→ Complete left facial palsy (**immediate onset?**)

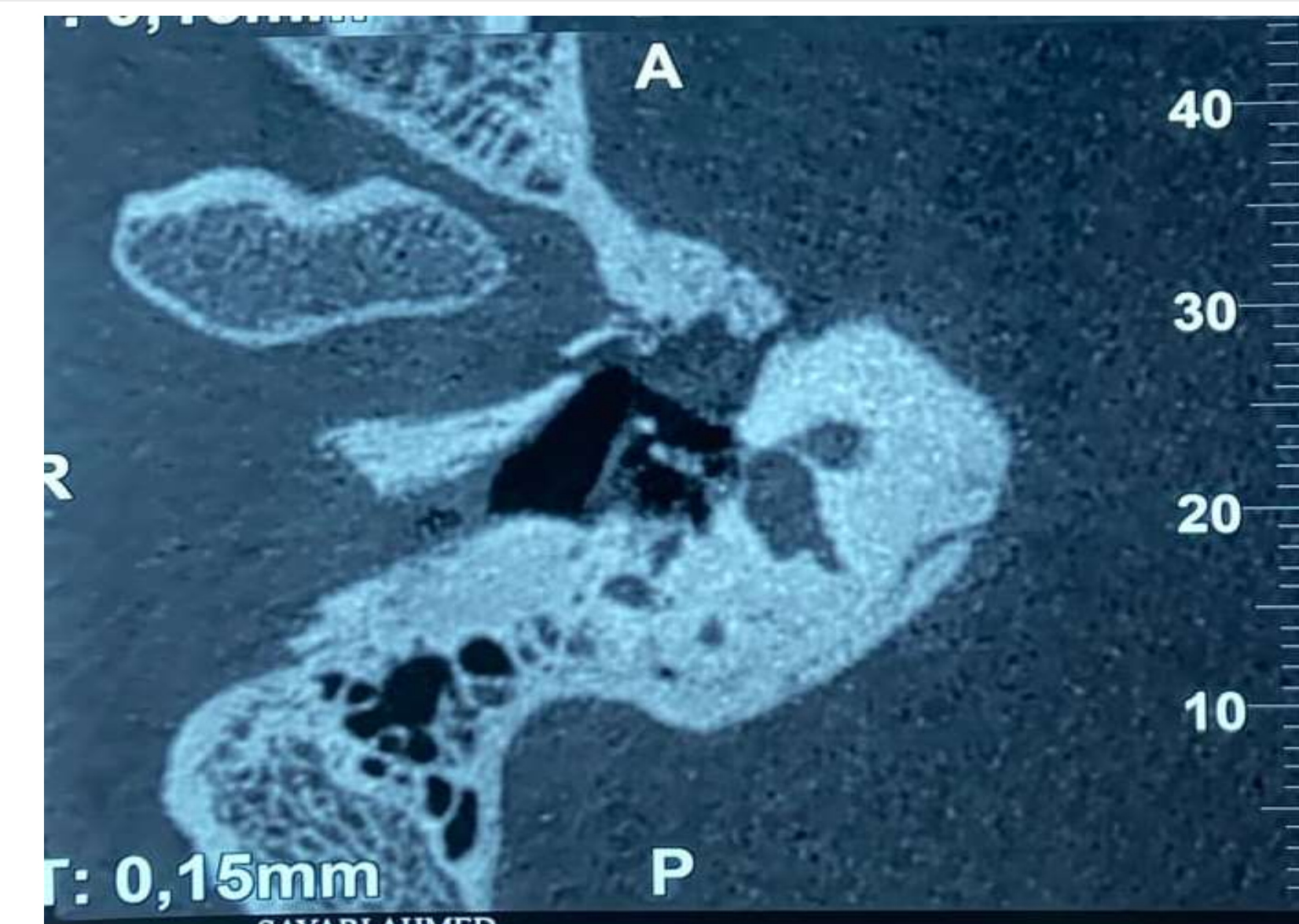
→ Right facial paresis (**delayed onset**)



MRI of Brain:

## Resultats

- **Audiometry: Bilateral conductive hearing loss**
- Air conduction thresholds: **30 dB**
- Rinne positive: **20 dB**
- **Electromyogram & Evoked Potentials:**
- Bilateral facial nerve palsy with predominant involvement of the upper division on the left side
- **CT scan of the temporal bones:** bilateral temporal bone fracture
- **MRI of Brain:** Diffuse inflammatory changes in bilateral facial nerves



The right-sided fracture affects the squamous portion and extends across the geniculate ganglion and the beginning of the second facial nerve segment.

### Treatment:

- **High-dose corticosteroids:** 1.5 mg/kg/day
- **Sulodexide**
- **Eye care**
- **Facial nerve rehabilitation:** Eight sessions

### Outcome (1 month later):

- **Right side:** Full recovery of facial function
- **Left side:** Facial Paralysis Grading Scale (FPGS) score of 3

## Conclusion

- Facial nerve palsy (FNP) can occur immediately due to direct nerve damage or be delayed because of swelling or hematoma.
- Diagnosing FNP is particularly challenging in unconscious patients and often requires CT scans and electro-diagnostic tests.
- Early surgery is recommended for immediate-onset cases involving nerve transection, while delayed-onset palsy is typically managed conservatively.
- This case report emphasizes the importance of early diagnosis and treatment of bilateral FNP following traumatic brain injury to maximize the chances of significant facial function recovery.

## Références

- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9515993/>
- <https://www.ncbi.nlm.nih.gov/books/NBK549815/>