Traumatic Collet-Sicard Syndrome with Associated VIIth and VIIIth Cranial Nerve Palsy: Time for a New Nomenclature

Abhijit Acharya[1] Satya Bhusan Senapati[1] Souvagya Panigrahi[1] Rama Chandra Deo[1] A.K. Mahapatra[1]

[1] Department of Neurosurgery, IMS and SUM Hospital, SOA University, Bhubaneswar, Odisha, India

Indian J Neurosurg 2023;12:273–275.

Address for correspondence Abhijit Acharya, MCh, Department of Neurosurgery, IMS and SUM Hospital, 751029 Bhubaneswar, Odisha, India (e-mail: abhijitkirtika@gmail.com).

Abstract

Collet-Sicard syndrome (CSS) is a rare condition associated with the involvement of cranial nerve (CN) IX to XII due to lesions involving the jugular foramen and hypoglossal canal. The most common causes are found to be tumors (primary or metastatic), trauma, vascular lesions, inflammatory processes, and iatrogenic complications. Primary intracranial tumors are an extremely rare cause of CSS. However, CSS associated with both CN VII and VIII palsy has been not yet described in English literature. We are presenting a rare case of a 32-year-old man who met with a road traffic accident while riding a bike that resulted in traumatic left-sided involvement of CNs from VII, VIII, IX, X, XI, and XII. The syndromes associated with CSS are mostly jugular foramen syndromes that have been tabulated. The association of CSS with facial palsy is quite rare. So much CN involvement in a traumatic case has so far not been reported in the Medical literature yet and thus, this becomes one of the first cases reported worldwide.

Keywords

- Collet-Sicard syndrome
- Cranial nerve palsies
- facial palsy
- magnetic resonance imaging
- trauma

Collet-Sicard syndrome (CSS) is a syndrome encompassing unilateral palsies of the lower cranial nerves extending from IXth to XIIth, first described in an injured soldier during World War I.[1] Though extended involvement of cranial nerves VII and VIII has been reported very few in the literature, almost all of them are reported to be due to metastasis from prostate cancer, hemangiopericytoma but none due to trauma.[2–4]

A 32-year-old gentleman presented to us with trauma to left craniocervical region, due to a road traffic accident. He suffered from pain in the neck, with acute onset right-sided deviation of mouth (►**Fig. 1**) with dribbling of saliva from the angle, decreased hearing in his left ear, slurring of speech, hoarseness of voice, and difficulty in swallowing and nasal regurgitation of saliva and food. Physical examination revealed partial hearing loss on left side with positive Rinne test and Weber lateralization to the right and left Lower Motor Neurone (LMN) type facial palsy grade III (as per House and Brackman scale), left-sided drooping of soft palate, absent gag reflex, and left-sided deviation of tongue (►**Fig. 2**), broadly showing left-sided severe dysfunction of VII, VIII, IX, X, XI, and XII cranial nerves. Laryngoscopy showed left-sided vocal cord paralysis. Pure tone audiometry revealed a total hearing loss in the left ear. The examination of the spinal accessory nerve was limited because of neck pain, but there was mild weakness of the left trapezius muscle. The remainder of the neurological examination was normal.

A computed tomographic scan of the neck demonstrated a fracture of left internal acoustic canal (►**Fig. 3**). A magnetic

article published online
October 31, 2023

DOI https://doi.org/10.1055/s-0043-1776022.
ISSN 2277-954X.

Thieme Medical and Scientific Publishers Pvt. Ltd., A-12, 2nd Floor, Sector 2, Noida-201301 UP, India

Fig. 1 Left LMN type facial palsy grade III (cranial nerve VII involvement).

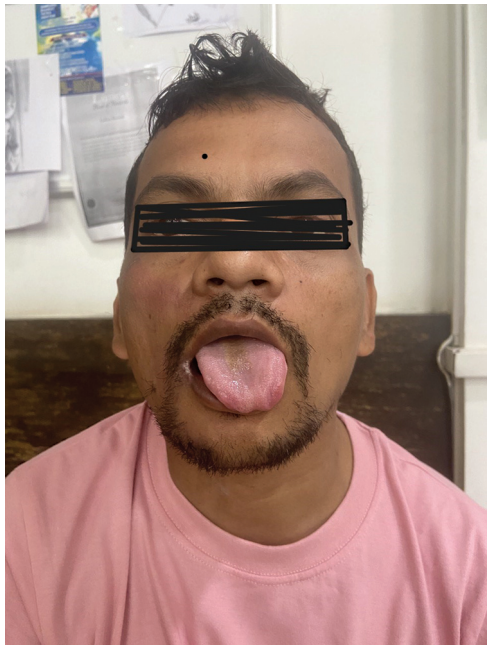

Fig. 2 Left-sided deviation of tongue on protrusion (cranial nerve XII involvement).

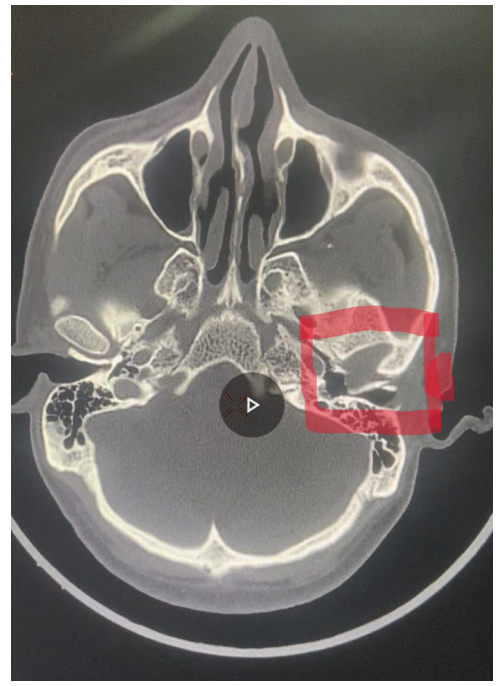

Fig. 3 Computed tomography scan of neck showing a fracture of left internal acoustic canal.

resonance imaging could not be done due to patient being noncooperative. The patient was managed conservatively with steroids (prednisolone), antibiotics, and analgesics. A nasogastric tube was placed. The patient received regular sessions of neuromuscular and orthopaedic rehabilitation. He is currently under follow-up.

The syndromes associated with CSS are mostly jugular foramen syndromes listed in ►**Table 1**. The involvement of unilateral complete palsy of cranial nerves from VII to XII can be considered to be very rare indeed in the literature, which makes it a very unique first report of such a case in the world literature.

Conflict of Interest
None declared.

Acknowledgement
We acknowledge SOA University, Bhubaneswar, Odisha, for their help in doing this work.

Table 1 List of syndromes affecting cranial nerves

Sl. no.	Syndrome	Affected cranial nerves
1.	Collet-Sicard syndrome	IX, X, XI, XII
2.	Villaret syndrome	IX, X, XI, XII, cervical sympathetic chain (Horner syndrome)
3.	Vernet syndrome	IX, X, XI
4.	Jackson syndrome	X, XI, XII
5.	Schmidt syndrome	X, XI
6.	Tapia syndrome	X, XII

References

1 Shine NP, O'Sullivan P. Collet-Sicard syndrome: a rare presentation of metastatic prostate adenocarcinoma. Auris Nasus Larynx 2005;32(03):315–318

2 Sharma BS, Mahajan RK, Bhatia S, Khosla VK. Collet-Sicard syndrome after closed head injury. Clin Neurol Neurosurg 1994;96(02):197–198

3 Connolly B, Turner C, DeVine J, Gerlinger T. Jefferson fracture resulting in Collet-Sicard syndrome. Spine 2000;25(03): 395–398

4 Heckmann JG, Tomandl B, Duhm C, Stefan H, Neundörfer B. Collet-Sicard syndrome due to coiling and dissection of the internal carotid artery. Cerebrovasc Dis 2000;10(06): 487–488

