ORIGINAL RESEARCH PAPER
Volume - 12 | Issue - 06 | June - 2023 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

ISOLATED ABDUCENS AND PERIPHERAL FACIAL NERVE PALSY DUE TO PONTINE HAEMORRHAGE

Neurology

Dr. Archana Verma* Professor and Head Department of Neurology, All India Institute of Medical Sciences Raebareli Munshiganj, Dalmau Road, Raibareli (U.P.) 229405, India. *Corresponding Author

Dr Narendra Singh Senior resident Department of Medicine, All India Institute of Medical Sciences Raebareli Munshiganj, Dalmau Road, Raibareli (U.P.) 229405, India

Dr. Alok Kumar Professor & Head, Forensic Medicine & Toxicology, UP university of Medical Sciences, Saifai, Etawah. -206130 (U.P.) India.

ABSTRACT

Introduction In general, of horizontal gaze and facial nerve dysfunction, motor, sensory, and cerebellar involvement are linked to the lesion in caudal region of the pons. We describe a case where the only neurological symptoms or signs were isolated peripheral facial and abducens nerve palsy. **Case report** A 52-year-old man presented with acutely developing giddiness, facial droop, and diplopia .His neurologic examination revealed horizontal gaze palsy to the right side and right sided facial nerve palsy. Computed tomography (CT) scan and MRI brain showed right paramedian pontine tegmentum intracerebral haemorrhage. **Conclusion** In our case there was no other neurological deficit apart from sixth and seventh nerve involvement due to small brainstem bleed and showed afavourable outcome and recovered completely after six months on conservative treatment.

KEYWORDS

INTRODUCTION

Strokes involving the caudal part of the pons are generally associated with abnormalities of horizontal gaze and facial nerve dysfunction along with motor, sensory, cerebellar involvement.[1] The solitary peripheral facial and abducens nerve palsy, which is thought to be caused by a caudal small pontine lesion, has only been described in a few case reports. [2,3]

We describe case of isolated peripheral facial and abducens nerve palsy without any other additional neurologic symptoms or signs due to small caudal pontine bleed.

Case report

A 52-year-old man presented with acutely developing giddiness, facial droop, and diplopia with a medical history of hypertension, diabetes mellitus, sleep apnoea, and is known alcoholic and smoker. His physical examination demonstrated that he was conscious, oriented. He had a blood pressure of 164/106 mmHg. His neurologic examination revealed horizontal gaze palsy to the right side and paralysis of abduction of the right eye and adduction of the left eye. Movements such as the saccade and pursuit were both impaired. Convergence and vertical eye movements (saccades and pursuit) were normal. Both eyes were resting in the midline and there was no strabismus. There were no pupillary abnormalities. Loss of the right nasolabial fold, inability to close his right eye, weakness in the right facial muscles, leftward distortion of the mouth's angle when smiling, and loss of the right sided forehead creases were present. His bilateral afferent corneal reflexes were present. There was no other neurological deficit.

Computed tomography (CT) scan showed right paramedian pontine tegmentum intracerebral haemorrhage and MRI brain T1 and GRE sequences showed hypotintense and on T1 sequence there was irregular thin peripheral rim of hyperintensity.(Fig 1,2,3)

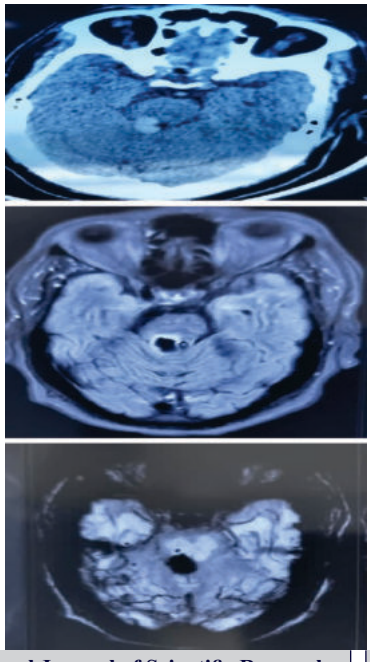
DISCUSSION

Our patient presented with an isolated right sided peripheral facial palsy and abducens nerve due to small spontaneous intracerebral haemorrhage in the right paramedian pontine tegmentum.

In the pons the abducens nucleus is situated, on the floor of the fourth ventricle, at the level of the facial colliculus. The facial colliculus, which can be seen on the dorsal surface of the fourth ventricle's floor, is the result of axons from the facial nerve looping around the abducens nucleus. Like the oculomotor and trochlear nuclei, which regulate eye movement, the abducens nucleus is situated near the midline. The last common channel for horizontal conjugate eye movements is the abducens nucleus [4, 5]. It is made up of two populations of neurons: interneurons, connect with the contralateral nucleus of the medial rectus muscle after crossing the midline, via the medial longitudinal fasciculus, and motor neurons, which innervate the ipsilateral rectus muscle. An ipsilateral gaze palsy is the result of lesions of the sixth nerve nucleus, which paralyse the abduction of the ipsilateral eye and the adduction of the contralateral eye [6].

A peripheral facial palsy may be connected to conjugate gaze palsy because the 7th cranial nerve fascicle loops around the abducens nucleus [4]. A few cases report has been reported with various other aetiologies like infarctions, histiocytosis X, tumours, multiple sclerosis, and Wernicke-Korsakoff syndrome [4, 6–8]. There are very rare case reports of intracerebral haemorrhage induced combined sixth and seventh nerve palsies. [9]

In our case there was no other neurological deficit apart from sixth and seventh nerve involvement due to small brainstem bleed and showed a favourable outcome and recovered completely after six months on conservative treatment.



REFERENCES

1. Donaldson D, Rosenberg NL. Infarction of abducens nerve fascicle as cause of isolated sixth nerve palsy related to hypertension. Neurology. 1988; 38:1654.
2. Porter JD, Baker RS. Anatomy and embryology of the ocular motor system. In Miller NR, Newman NJ, eds. Walsh and Hoyt's Clinical Neuro-Ophthalmology, 5th ed, Vol 1. Baltimore, Williams & Wilkins. 1998:1043–99.
3. Bronstein AM, Morris J, Du Boulay G, et al. Abnormalities of horizontal gaze: clinical, oculographic and magnetic resonance imaging findings: I. Abducens palsy. J Neurol Neurosurg Psychiatry. 1990; 53:194–199.
4 Müri RM, Chermann JF, Cohen L, Rivaud S, Pierrot-Deseilligny C: Ocular motor consequences of damage to the abducens nucleus area in humans. J Neuroophthalmol 1996; 16: 191–195.
5 Pierrot-Deseilligny C: Circuits oculomoteurs centraux. Rev Neurol 1985; 141: 349–370.
6 Pierrot-Deseilligny C, Goasguen J: Isolated abducens nucleus damage due to histiocytosis X. Brain 1984; 107: 1019–1032.
7 Saitou N, Takahashi J, Kashima Y, Ishikawa H: Horizontal gaze palsy due to lesion of the abducens nucleus detected with magnetic resonance imaging. Nippon Ganka Gakkai Sasshi 1995; 99: 624–627.
8 Hamasaki S, Motomura M, Koga H, Nakamura T, Yoshimura T: Persistent lateral gaze palsy and abducens nerve palsy due to pontine infarction. Rinsho Shinkeigaku 1998; 38: 344–346.
9. Lhermitte F, Pagès M. Abducens Nucleus Syndrome due to Pontine Haemorrhage. Cerebrovasc Dis 2006; 22:284–285.