

Isolated Facial Nerve Palsy: A New Lacunar Syndrome

Vaishali Sharai¹, Deepak Gupta², Anchin Kalia³, Anil Panwar⁴, Yudhishthir Kuntal⁵, Naveen Yadav⁶, Navin Chhaba⁷, Pushpendra Chauhan⁸, Manjeet Meel⁹, Pruthvi Patel¹⁰, Shikha Yadav¹¹, Piyush Batra¹²

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ABSTRACT

Most facial palsies are lower motor neuron lesions. Occasionally, however, an isolated facial palsy is seen, which appears to be upper motor neuron in nature. Computed tomography demonstrated small deep infarcts in the internal capsular/corona radiata regions. Pure upper motor neuron facial palsy may be another lacunar syndrome due to a lesion in the internal capsule or corona radiata.

Keywords: Corona radiata, Facial palsy, Internal capsule, Stroke.

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INTRODUCTION

Stroke is the leading cause of morbidity and disability worldwide. The global burden of stroke is still high, with an estimated incidence of 15 million new cases per year, of which two-thirds occur in developing countries. The disability-adjusted life years of stroke patients were >87% in developing countries, and this was seven times higher than in developed countries. This is a case of a rare presentation of stroke with isolated facial nerve palsy.

CASE DESCRIPTION

A 54-year-old male patient presented to the hospital with complaints of slurring of speech for 4 days, change in voice with nasal intonation for 4 days and difficulty in swallowing for 2 days. He was a known case of (K/C/O) with diabetes mellitus, hypertension, and depression. He was also a beedi smoker—one bundle/day for the last 35 years and a tobacco chewer for the last 10 years.

There was no history of fever/trauma seizure—like activity/injury/morning fatigue/diplopia/hearing loss/vertigo/loss of consciousness/vomiting.

On examination, the patient was conscious and well-oriented to time, place, and person, with a regular heart rate of 70 beats/minute and blood pressure of 140/90 mm Hg. Neurological examination revealed that the angle of the mouth deviated to the left side and air was able to leak from the right side when the air was blown against the cheeks. Wrinkling was present on his forehead and he was able to raise both eyebrows. The plantar response was flexor on both sides. Fundus examination was normal. Another systemic examination was also normal. Electrocardiogram was suggestive of left ventricular hypertrophy. Biochemical investigations of stroke protocol revealed dyslipidemia. Magnetic resonance imaging (MRI) brain showed acute infarcts in the left centrum semiovale and corona radiata (Fig. 1).^{1,2}

The patient was put on dual antiplatelets, statins, and physiotherapy. The patient showed improvement in facial weakness during a hospital stay.

DISCUSSION

Corona radiata is a white matter sheet that continues inferiorly as the internal capsule and superiorly as the centrum semiovale

^{1–12}Department of Internal Medicine, Mahatma Gandhi Medical College & Hospital, Mahatma Gandhi University of Medical Sciences & Technology, Jaipur, Rajasthan, India

Corresponding Author: Deepak Gupta, Department of Internal Medicine, Mahatma Gandhi Medical College & Hospital, Mahatma Gandhi University of Medical Sciences & Technology, Jaipur, Rajasthan, India, Phone: +91 7597965979, e-mail: deepakguptamd@gmail.com

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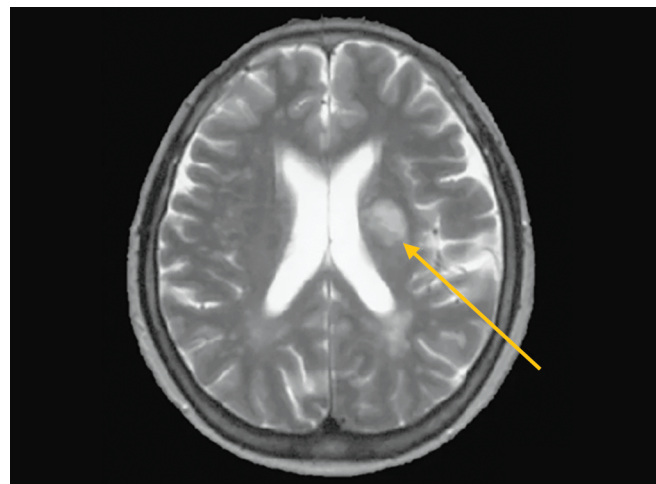


Fig. 1: Axial T2 weighted MRI showing infarct in left corona radiata

(Fig. 2). This sheet of both ascending and descending axons carries most of the neural traffic from and to the cerebral cortex.³

We want to draw attention to a syndrome of sudden onset facio-bulbar weakness which may be confused with Bell's palsy because of the relative sparing of the limbs and good outcome.

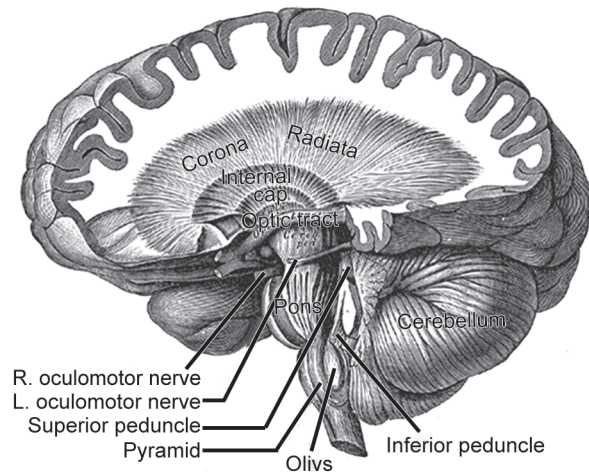


Fig. 2: Dissection showing the course of cerebrospinal fibers

It appears that such lesions, when bilateral, may cause both facial palsy and selective pseudobulbar palsy with sparing of limbs. The corona radiata may be the preferential site of lesions in such cases since the corticospinal projections are more separate and not as tightly packed together as in the internal capsule.

ORCID

Anchin Kalia <https://orcid.org/0000-0001-8869-9351>

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