

Eight and a Half Syndrome with Hemiparesis and Hemihypesthesia: The Nine Syndrome?

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“Eight-and-a-half” syndrome is “one-and-a-half” syndrome (conjugated horizontal gaze palsy and internuclear ophthalmoplegia) plus ipsilateral fascicular cranial nerve seventh palsy. This rare condition, particularly when isolated, is caused by circumscribed lesions of the pontine tegmentum involving the abducens nucleus, the ipsilateral medial longitudinal fasciculus, and the adjacent facial colliculus. Its recognition is therefore of considerable diagnostic value. We report a 71-year-old man who presented with eight and a half syndrome associated with contralateral hemiparesis and hemihypesthesia, in which brain magnetic resonance imaging scans revealed a lacunar pontine infarction also involving the corticospinal tract and medial lemniscus. These features could widen the spectrum of pontine infarctions, configuring a possible “nine” syndrome. **Key Words:** Acute pontine stroke—neuroimaging—neuro-ophthalmology.

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Case Report

A 71-year-old man presented with nausea and vomiting, horizontal diplopia, left lateropulsion, and left hypoesthesia. His medical history was significant for several vascular risk factors, such as obesity, smoking, hypercholesterolemia and, more recently, obstructive sleep apnea syndrome. In 2008, he was hospitalized for angina pectoris; however, no significant stenosis of coronary arteries were seen upon coronarographic examination. At admission to our department, treatment for benign prostatic

hypertrophy was the sole therapy taken by the patient, and his National Institutes of Health Stroke Scale score was 3. The neurologic examination revealed right horizontal gaze palsy, internuclear ophthalmoplegia (INO), and right-sided lower motor neuron facial nerve palsy associated with left arm slight hemiparesis and hemihypesthesia. A magnetic resonance imaging (MRI) scan revealed an area of restricted diffusion in the right pons involving the abducens nucleus, adjacent medial longitudinal fasciculus (MLF), and facial colliculus, extending to the ipsilateral medial lemniscus and corticospinal tract (Fig 1). The clinical and MRI characteristics were consistent with an acute pontine ischemia. The immediate treatment with antiaggregating therapy (acetylsalicylic acid 300 mg) and the subsequent physiotherapy led to a sensible improvement of the ocular movement disturbances and left arm hyposthenia.

Discussion

“Eight and a half” syndrome (EHS)¹ is the rare association of “one and a half” syndrome² (i.e., conjugated horizontal gaze palsy [the “one”] and internuclear ophthalmoplegia [the “half”]), with ipsilateral fascicular

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