Interesting Case Report of Facial Palsy

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Abstract

This report is of a case presented as Bell's palsy which on further investigations turned out to be a rare cause of facial paralysis i.e lower pontine infarct. The lesion must be of appropriate size at nuclear level to produce isolated facial nerve palsy. But sometimes pontine infarct presenting as lone facial palsy which is very rare should also be taken into consideration and MRI study is a must so that we may not miss the possible rarity.

Key words: Facial nerve palsy, MRI study, Pons

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Introduction

Bell's palsy was first described by Sir Charles Bell, a Scottish surgeon, early in the 19th century. It can occur at any age and shows increased incidence with age, sometimes also found in young adults. It is also associated with diabetes and high blood pressure [1].

Case presentation

A 51 year-old male presented with history of hypertension for last 7 years with irregular treatment presented with vomiting, one-sided facial weakness and difficulty in speaking at medicine department OPD of Santhiram Medical College Hospital, Nandyal. On general examination, he was conscious, had slurred speech. His blood pressure was 200/130

mm of Hg. On neurologic examination had facial weakness on left-side, unable to close left eye, deviation of the angle of the mouth to the right and absence of left naso -labial fold (Figure 1). Because of the acute presentation and hypertension, provisionally considered to be a case of cerebro-vascular accident probably a small haemorrhage. The MRI was done which showed small infarct of about 5 mm on dorsal pons along with encephalopathy picture (Figure-2).

Figure 1: Clinical Manifestations of Facial Palsy

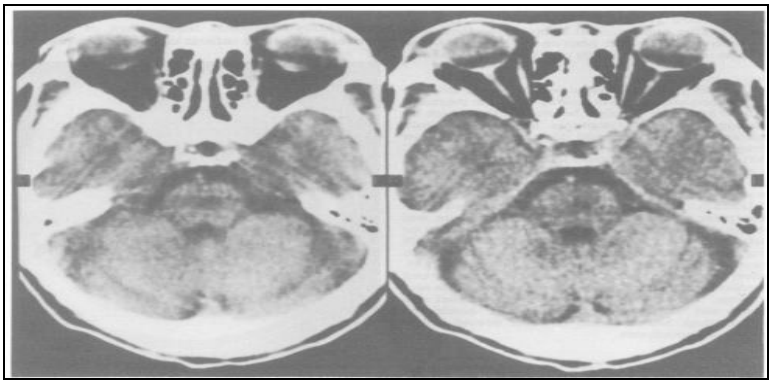

Figure 2: MRI showing an infarct of about 5 mm on dorsal pons along with encephalopathy changes.

Discussion

Facial nerve palsy is frequently found in clinical practice with clear clinical manifestations the level of abnormality and can be localized with a detailed neurological examination. But radiologic imaging has an important role in confirming the diagnosis [2,3].

Bell's palsy is the most common cause of acute facial nerve paralysis. Once it was thought idiopathic, but recently linked to Herpes infection[4]. Another more severe form of herpes zoster with facial palsy, called Ramsay-Hunt syndrome. Other causes are Lyme disease polio, TB [5, 6].

Bell's palsy is believed in the most recent studies to be due to herpes virus. Other proposed etiologies include vascular problems in the inner ear. Radiologic imaging plays an important role in the overall assessment of facial nerve palsy. A lesion located in the pons can produce an isolated facial nerve palsy or complex cranial neuropathy, depending upon its size and specific location within the brainstem [6]

The Lacunar infarct is a rare cause of solitary infranuclear facial paralysis [3,4,5]. The present case was

one of the rarest in which the patient presented with Bell's palsy and on investigating by MRI showed a pontine infarct.

The probable cause for this type of palsy may be supranuclear and nuclear lesions which is due to a lacunar infarct affecting fibers in the internal capsule going to the nucleus. The facial nucleus itself can be affected by infarcts of the pontine arteries from basilar artery [4,5,6].

Other common causes are tumours exerting pressure, pontine infarcts and ear infections. Pontine infarcts form 7% of ishaemic strokes contributing 15% of posterior circulation infarcts [5]. Frequently posterior circulation small vessels are affected. In a study of 139 stroke patients Oppenheim et al [7] found that 5.8% patients had negative MRI findings within the first 24 hrs. Isolated dorsal pontine infarct is very rare and hence reported.

The lesion must be of appropriate size at nuclear level to produce isolated facial nerve palsy. Larger lesions can produce paralysis of the abducent nerve also because of its close anatomical relationship. The patient's age, onset of attack and pattern of image enhancement will significantly contribute in making a definitive diagnosis [8,].

Conclusion

Even though common causes of Bell's palsy includes infections of auditory canal, viral infections, cerebrovascular accidents such as thrombosis, embolism and haemorrhagic infarcts. But sometimes pontine infarct presenting as lone facial palsy which is very rare should also be taken into consideration and MRI study is a must so that we may not miss the possible rarity. The final diagnosis was lone facial nerve palsy due to pontine lacunar infarct and hypertensive encephalopathy.

References

1. Bell's palsy: Prognosis and treatment [http:/ / www.uptodate.com/ contents/ bells-palsy-prognosis-and-treatment (date accessed 20 May 2013).
2. Holland NJ, Weiner GM: Recent developments in Bell's palsy.*BMJ* 2004, 329:553-557.
3. Bassetti C, Barth A, Regli F: Isolated infarcts of the pons. *Neurology* 1996, 46:165-175.
4. Musani MA, Farooqui AN, Usman A, Atif S, Afaq S, Khambaty Y, Ahmed L. Association of herpes simplex virus infection and Bell's palsy. J Pak Med Assoc. 2009 ;59(12):823-5.
5. Saia V, Pantoni L: Progressive stroke in pontine infarction. Acta Neurol Scand 2009, 120:213-215.
6. Ling L, Zhu L, Zeng J, Liao S, Zhang S, Yu J, Yang Z: Pontine infarction with pure motor hemiparesis or hemiplegia: a prospective study.BMC Neurol 2009, 9:25.
7. Oppenheim C, Stanescu R, Dormont D, Crozier S, Marro B, Samson Y, Rancurel G, Marsault C: False-negative diffusion-weighted MR findings in acute ischemic stroke. Am J Neuroradiol 2000, 21:1434-1440.
8. Novy J, Michael P, Poncioni L, Carota A: Isolated nuclear facial palsy, a rare variant of pure motor lacunar stroke. Clin Neurol Neurosurg 2008, 110:420-421.