



RESEARCH ARTICLE

PERIPHERAL FACIAL NERVE PALSY IN A PATIENT WITH UNCONTROLLED HYPERTENSION – A RARE ENTITY

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ARTICLE INFO

Article History:

Received 20th October, 2020

Received in revised form

28th November, 2020

Accepted 14th December, 2020

Published online 30th January, 2021

ABSTRACT

We report a case of peripheral facial nerve palsy with uncontrolled hypertension. There are few case reports in literature which shows association between facial nerve palsy and malignant hypertension especially in adults.

Keywords:

Bell's palsy, Hypertension, Adherence, Risk Factors.

INTRODUCTION

Bell's palsy or idiopathic facial paralysis, is most common cause of unilateral facial paralysis. It is an acute, unilateral, peripheral, lower motor neuron facial paralysis that gradually resolves over time in 80-90 % of patients. Bell's palsy accounts for 49-51% of all cases who present with facial nerve weakness (May, 1982) Various other causes include stroke, brain tumors, tumors of parotid gland and infratemporal fossa, cancer involving facial nerve and systemic and infectious diseases including herpes zoster, Sarcoidosis, and Lyme disease (Peitersen, 1982). The association between facial paralysis and severe systemic hypertension was first described by Moxon in 1869 (Moxon, 1869) Prolonged, uncontrolled hypertension is associated with signs of target organ damage or clinical cardiovascular diseases such as left ventricular hypertrophy, angina, heart failure, stroke, transient ischemic attack, nephropathy, peripheral arterial disease, or retinopathy. However, most of patient with essential hypertension are asymptomatic (Joint National Committee on Detection, 1997) The association between facial nerve palsy and hypertension has been reported in some of pediatric patients and rarely in adults (Savadi-Oskouei, 2008; Still, 1967; Lloyd, 1966; Trompeter, 1982; Siegler, 1991; Harms, 2000) Facial paralysis is a rare event that has never been directly linked to hypertension in clinical trial. We report a case of facial nerve palsy in middle aged women who is non-compliant to treatment.

CASE HISTORY

A 35 year old female presented to the general medicine outpatient department with history of slurring of speech, right facial weakness and pain in and behind right ear for last two days since presentation. She described the pain as dull-ache without any aggravating and relieving factors. She also gives history of dribbling of saliva from right angle of mouth and frontal headache which was moderate in intensity without any nausea, vomiting, photophobia or phonophobia. On the day of onset of symptoms she took consultation at private ayurveda practitioner who prescribed her antibiotic and NSAIDS. As her symptoms progressed she presented to us after two days with above mentioned complaints. On revealing past medical history she was known hypertensive for one and half year but left treatment for last six months. Medications which was prescribed to her to control hypertension included telmisartan 40mg/day plus amlodipine 5mg/day. On examination, she was alert and oriented with BP of 188/120 mm Hg in right upper limb and 174/112 mm Hg in left upper limb, heart rate was 70 beats/min and RR was 18 breaths/min. Repeat BP after 2 minutes was 184/118 mm Hg in right upper limb. Rest of systemic examination was within normal limits except right VII cranial nerve palsy. Visual acuity was 6/18 bilaterally. Fundus examination shows bilateral papilloedema. A diagnosis of malignant hypertension with right peripheral facial palsy was kept. A computed tomography (CT) of head was normal. Laboratory investigations revealed the following at time of admission: blood urea nitrogen 41 mg/dl, serum creatinine 1.2 mg/dl, random blood glucose 112 mg/dl, sodium 132 meq/l, potassium 4 meq/l, hematocrit 35%, white blood cell count 5300, calcium 9.2 mg/dl.

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No ST or T wave changes seen on ECG suggestive of acute ischemic injury. Although we felt that most likely cause of facial palsy was malignant hypertension, she was treated empirically with short course of prednisolone for possible Bell's palsy on consultation with neurologist. For malignant hypertension patient was admitted and started on injection nitroglycerin, telmisartan 40mg/day plus amlodipine 5mg/day. Artificial eye lubrication and nighttime eye patches was advised. BP was controlled and patient was discharged after three days on telmisartan 40mg/day, amlodipine 5mg/day plus short course prednisolone for possible Bell's palsy. On day seven of follow up her BP was 152/94 mm Hg and she felt improvement in her slurring of speech and ear-ache.

DISCUSSION

The most common cause of acute unilateral facial palsy is Bell's palsy, which is likely to be idiopathic in nature (May, 1982) The association between hypertension and facial nerve palsy was first described was by Moxon in 1869 (Moxon, 1869) Majority of these association were seen in children and rarely in adults (Still, 1967; Lloyd, 1966; Trompeter, 1982; Siegler, 1991; Harms, 2000) We present a case of facial nerve palsy in a middle aged women in setting of malignant hypertension who is non-compliant to treatment. It appeared that onset of palsy with rise in blood pressure and improvement in symptomatology after control of blood pressure. There are very few clinical trial which shows relationship between facial paralysis and malignant hypertension. Epidemiological studies have tried to find out risk factors for Bell's palsy and several of these reports has identified hypertension as a risk factor for Bell's palsy. A few handful of studies have shown this relationship in adult patients (Moxon, 1869; Clarke, 1956; Ellis, 1999). Although exact mechanism which lead to this hypertension induced facial nerve paralysis remain unclear, possible etiology has been hypothesized to be widespread arteriolar injury which is characteristic of malignant hypertension. Specifically, facial nerve is thought to be highly vulnerable to hypertension induced injury which may be due to focal ischemia, local edema or hemorrhage in the facial canal (Trompeter, 1982). This is also supported by autopsy findings of facial canal hematoma in two previously published cases (Moxon, 1869; Lloyd, 1966) Pressure effect on facial nerve could be due to thickened vessel walls or formation of peri-neural edema which has been found to occur in pre-eclampsia induced Bell's palsy

(Ellis, 1999). In conclusion, we report a case of peripheral facial nerve palsy associated with malignant hypertension. This association is seen in past too, but it is not a well recognized entity especially in adult population. So clinician should have in their mind high index of suspicion to avoid devastating complication of hypertension.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. The patient has given her consent for her images and other clinical information to be reported in journal. The patient understand that their name and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship: Nil.

Conflicts of Interest: There are no conflicts of interest.

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