

Idiopathic Peripheral Facial Palsy and Preclampsia: A Case Report

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ABSTRACT

During pregnancy, pre-eclampsia can be associated to idiopathic peripheral facial nerve palsy. It can be explained by similar physiopathological mechanisms. Facial palsy usually appears during the third trimester of pregnancy or in the early postpartum period. The prognosis is generally good and is not affected by the pregnancy. The occurrence of peripheral facial palsy during pregnancy should alert the obstetrician to look for a possible pre-eclampsia. We report a case of a patient with pre-eclampsia who developed idiopathic peripheral facial palsy during the third semester of pregnancy. Evolution was favorable, following treatment combining anti-hypertensive medication, corticosteroid therapy and ophthalmologic care.

Keywords

Bell's palsy, Idiopathic facial palsy, Preeclampsia.

Introduction

Idiopathic peripheral facial palsy (IPFP) is a common condition that most clinicians are familiar with. Its association to pregnancy was first reported by Charles Bell in 1830 [1]. IPFP is distinct from central facial palsy. It is the most common unilateral cranial nerve pathology. IPFP's symptoms remain the same during and outside pregnancy: the involved side of the face seem to be smooth, immobile, and expressionless [1].

Case Report

Mrs J K, a 31-year-old, IGIP, diagnosed with high blood pressure for the past four years, and treated by methyl dopa 500mg 1cpd 3 per day since the pregnancy began. She came to our tertiary care center for severe pre-eclampsia at 40 weeks of pregnancy, with complaints of facial weakness. On examination, she presented high blood pressure at 170/110 mmHg, +++ proteinuria. Her pulse was 95/min, RR was 19/min. Uterus was tense, with minimal vaginal bleeding. Furthermore, the patient presented a Bell's phenomenon, headaches, and osteotendinous hyperreflexia.

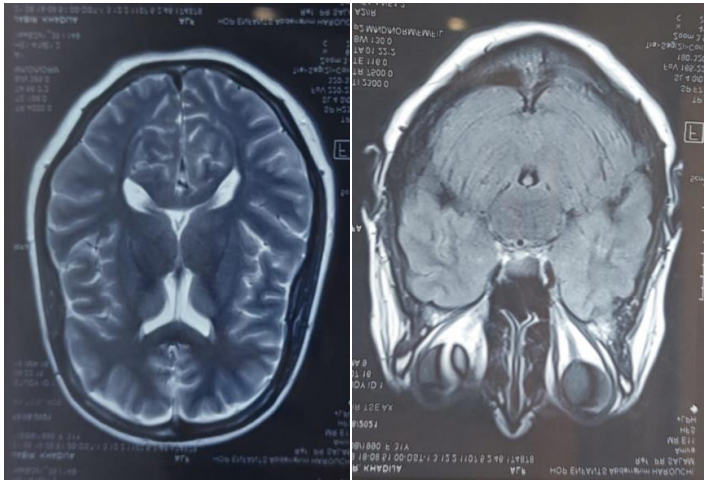
Antihypertensive and anticonvulsant drugs were administered (nicardipine 3 ml/h and magnesium sulfate 2 g IVL over 30 min, then 1 g/h). Ultrasonography revealed a single live fetus, with 40 weeks gestational age. Biological results did not reveal any abnormalities. Placental abruption was suspected. An Emergency cesarean section was indicated, leading to the birth of a baby girl weighing 2600 g, with correct Apgar score. A brain MRI, was performed, and did not reveal any anomalies (Figures 1 and 2). After excluding other diagnoses, and after neurologists opinion, idiopathic peripheral facial nerve palsy has been retained. 1 mg/kg of Prednisolone per day was introduced.

During the postpartum period, the patient improved her palsy over two months. She also kept correct blood pressure during the follow-up.

Discussion

The incidence of IPFP during pregnancy is about 45/100.000 born [3], while it is 17/100.000 per year in a group of non-pregnant women of the same age [5]. On the other hand, the incidence of IPFP combined to pre-eclampsia is about 22-30% [2]. The IPFP during pregnancy seems to predict the occurrence of preeclampsia.

However, it cannot be classified as a severe sign of pre-eclampsia and should not be confused with the common prodromal symptoms of eclampsia [4]. It usually occurs during the third trimester of pregnancy (75% of cases), or more rarely, as here, in the postpartum period (13% of cases) [5].



Figures 1 and 2: Brain MRI normal images.

Several pathophysiological theories explaining the association between IPFP and preeclampsia have been proposed in the literature. The increased volume of the extracellular sector, aggravated by hypertension and hypoprotidemia due to preeclampsia, may compress the facial nerve at its bony canal [2]. The same phenomenon can explain the increased frequency of carpal tunnel syndrome during pregnancy [3]. The second possibility is the viral causes. Pregnancy causes an immunodepression that predisposes to reactivations of herpes viruses [2]. These viruses have sometimes been incriminated as a possible cause of preeclampsia [3]. Moreover, the hypercoagulability during pregnancy could be the cause of vasa nervorum's thrombosis, leading to ischemia and then to neural palsy [3]. Furthermore, arterial hypertension could have a pathogenic effect, leading also to vasa nervorum microemboli and vasospasm [6]. Last, some suggest, as for pre-eclampsia, a familial tendency to develop idiopathic facial palsy [2].

Pregnancy impacts idiopathic facial palsy's clinical evolution. It can reach up to 90% of total recovery over seven weeks [8], and 50% of sequels due to sub-optimal treatment [5]. The occurrence of IPFP during pregnancy does not influence neonatal prognosis [2]. Although, the association with pre-eclampsia and the management imposed by it, explain the increase in prematurity and the number of caesarean sections [7]. In this sense, fetal extraction to prevent possible pre-eclampsia does not seem justified. However, in case of association between pre-eclampsia and IPFP management must remain the same, even in the absence of IPFP, taking into

account only the elements of severity of pre-eclampsia, according to gestational age, and fetal and maternal tolerance, as specified in the recommendations on the management of severe forms of pre-eclampsia made by the CNGOF, SFAR, SFMP and SFNN [4]. Treatment of IPFP includes rehabilitation, eye protection (eye drops, occlusive dressings) and psychological support. The efficacy of corticosteroids therapy has been demonstrated. Due to a minimal risk of increasing congenital anomalies such as cleft palate, their use is limited to the last two trimesters of pregnancy and postpartum [5]. Similarly, acyclovir has been shown to be useful if introduced within the first three days after the onset of paralysis, and it can be given regardless of the term [5].

Conclusion

Pre-eclampsia and IPFP have a similar pathophysiology explaining their association. The onset of IPFP during pregnancy does not seem to affect the neonatal prognosis, and its postpartum resolution is generally good. Therefore, fetal extraction does not seem to be recommended. However, in all situations where a pregnant patient develops IPFP, the obstetrician must be particularly vigilant about detecting pre-eclampsia, and the severity of its fetal and maternal consequences. Closer monitoring of blood pressure and albuminuria seems necessary. Obstetrical management should be guided by pre-eclampsia. The treatment of IPFP during pregnancy should combine symptomatic measures, as well as aciclovir and corticosteroid therapy after the first trimester of pregnancy.

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