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A Rare Case in Early Postpartum Period: Bilatral Facial Paralysis

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ABSTRACT

Introduction: Losing the bilateral muscle functions on one side of the face or both sides is called facial paralysis (FP). FP is observed more frequently in women during pregnancy and in early postpartum period when compared with other women. Bilateral FP, on the other hand, is a very rare situation among other paralyses. The facial nerve paralysis may be observed due to various reasons, such as genetic factors, vascular ischemia and inflammation developed due to viral infection, autoimmune diseases, temporal bone fractures, head-neck tumors, and central nervous system lesions. However, despite these known factors, the majority of FP cases are idiopathic. For this reason, more diseases must be considered to shed some light on the etiology of FP. It is already known that corticosteroids are efficien twhen used early in treatment. A complete blood counts and serologic tests were performed in patients, and the results came back normal. During a 14-day treatment, 1mg/kg methyl prednisolone was applied. After 3 weeks, complete healing took place.

Case Report: Written informed consent was obtained from who participated in this study. A 36-year-old female patient worked as a teacher in an educational institution. As of the postpartum 5th day, the patient first experienced sudden pain and then numbness, which were more prominent in the left cheek and ear. After 2 days, the patient reported with a slight pull, first on the left side of the face and then on the right side, disruption in smiling, being unable to close the eyelids adequately, difficulty at chewing, slight swelling in the face and lips.

Conclusion: In this case study, we present a clinical follow-up and treatment of a postpartum patient diagnosed with idiopathic bilateral FP, accompanied by literature findings.

Keywords: Bilateral facial paralysis, postpartum early period, emergency department

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Introduction

Facial paralysis (FP) is the most frequent type of peripheral paralysis. Typically, it is a peripheral sub-motor neuron paralysis that affects all muscle groups in only one side of the face and is limited, has a sudden onset, and has no known reason. The most frequent symptom in patients is a facial motor dysfunction that may change from light paresis to complete paralysis, depending on the amount of the neural damage. Clinical findings generally change according to the localization of the lesion in the facial nerve (1). FP is observed due to many reasons. The rate of it being diagnosed in women of reproductive age is two-to fourfold higher when compared with men from the same age group. The frequency increases especially in pregnancy. In previous studies, while the pregnancy and the postpartum period incidence was determined to be 38.1 and 45.1/100.000, respectively, the incidence in other women from the same age group was found at 17.4/100.000.Facial diplegia is less observed when compared to FP, and it is extremely rare in pregnancy (2).

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Case Report

A 36-year-old female patient worked as a teacher in an educational institution. She had two healthy twin babies, a boy and a girl, under spinal anesthesia 5 days before. As of the postpartum 5th day, the patient first experienced pain and then numbness, which were more prominent in the left cheek and ear. After 2 days, the patient reported a slight pull first on the left side of the face and then on the right side, disruption in smiling, inability to close the eyelids adequately, difficulty at chewing, slight swelling in the face and lips. The patient did not have fever, difficulty at walking, infection, trauma, or difficulty at breathing during the application. Her general status was well during the examination. There were no meningeal irritation findings. The eyeball movements were free, but the movements of the eyelids were limited. The patient could not close the eyelids completely and could not lift the eyebrows adequately. The light reflex was +/+, and the pupils were isochoric. The bilateral nasolabial duct was slightly blurry, the uvula was in the middle line, and the pylics could rise equally. The gag reflex of the patient was bilaterally received. The muscle force was full in the extremities, and the deep tendon reflexes were normoactive. The Babinski and Clonus were bilaterally negative. The patient did not have any sense of deficiency, and the cerebellar system, Rhomberg, and tandem examinations were normal. The ear and other system examination were normal.

Since FP starts acutely and progresses bilaterally, the Guillain-Barre syndrome was considered. On the electroneuromyography, the examination made on the 3rd day following the bilateral FP, the motor distal latencies in the right-side were detected as normal. While the needle electromyography findings were normal in the right arm and leg, further dilution was determined in the muscles with the facial nerve innervation on both sides, and polyphasic motor units and spontaneous denervation activities were observed. In addition, there were neurogenic involvement findings in the musculus orbicularis oculi and musculus orbicularis oris. These finding suggest that the facial involvement was evidentin House-Brackmann FP to bilateral Stage III taught. Since the patient and her relatives did not accept the lumber puncture, the BOS examination could not be performed. However, full blood count, biochemistry, peripheral smear, VDRL, TPHA in serum, and mono-tests were conducted in our patient, and all the findings were normal. No pathologies were determined on the contrast-enhanced cranial magnetic resonance imaging, in the echocardiography, and in lung X- ray graphics. Echocardiography was performed for postpartum cardiomyopathy. In terms of the Lyme Disease, the specific IgM and IgG values were investigated in the serum, and all the findings were normal. As a result of the tests, the patient was diagnosed with idiopathic bilateral FP. After consulting the neurology and otorhinolaryngology departments, methylprednisolone 1mg/kg was applied for 14 days. To avoid the complications that might appear in the patient, a full blood count and biochemistry tests were repeated every 5 days. No complications developed. As of the 10th day of the treatment, the patient could close both eyelids, and her facial mimics recovered. The patient was discharged with a recommendation to gradually quit the methyl prednisolone treatment and come back for policlinic controls. At a 1-month follow-up, it was observed that the complaints regressed and that FP was almost completely healed. Written informed consent was obtained from who participated in this study.

Discussion

Scarce data exist regarding the association between FP and pregnancy. In a review of the literature, it seems that the timing of FP presenting during pregnancy arises almost exclusively during the third trimester and puerperium. In addition, a significantly higher rate of gestational hypertension and preeclampsia was noted, 4 to 5 times higher than in the general obstetric population. Physiologic and pathophysiologic conditions during the third trimester and puerperium such as immunosuppressive state, susceptibility to viral infection, especially Herpes Simplex Virus (HSV), hypercoagulability state, hypertension and preeclampsia, an increase in total body water, changes in the levels of estrogen and progesterone, and increased cortisol levels may explain the higher rate of FP observed during this period of pregnancy. Few studies have examined the association between FP and pregnancy. The incidence of FP is reported to be slightly higher in pregnant women than in the general population, appearing almost exclusively during the third trimester and early puerperium (3). Our case was consistent with the literature, and the complaints had started on the 5th day of the early puerperium period. Pregnancy, hypertension, and diabetes mellitus are the factors increasing the bilateral FP risk. A previous study showed that diabetes mellitus increased the risk of repetitive FP2.5 times. A probable reason might be that diabetic patients are prone to nerve degeneration. Also, there is a hypothesis claiming that hypertension causes vasodilatation and edema with direct pressure effects and thus leads to FP by causing hemorrhage in the facial channel (4). In our case, there were no hyper tension and diabetes diagnoses. However, the patient had a history of twin babies via caesarian birth under spinal anesthesia. In previous studies, bilateral FP was detected only in 3 of 1000 FP cases. It is observed generally as the finding of a systemic disease. Although facial diplegia etiology is similar to that of FP, nearly 50% of the facial paralyses are observed to be idiopathic. This percent decreases to 20% in facial diplegia (5).

The diagnosis of idiopathic facial diplegia may only be made after comprehensive tests. Facial diplegia is seldom observed during pregnancy, and there are very few case studies reported in the literature (6). In our case, the diagnosis was also made after a comprehensive work. In Mobius syndrome, Guillain-Barre syndrome, sarcoidosis, infectious mononucleosis, bilateral temporal bone fractures, brain stem leukemic infiltration, Lyme disease, encephalitis, Melkersson-Rosenthal syndrome, multiple sclerosis and Bell paralysis, bilateral facial nerve involvements may be observed either simultaneously or alternatively (7). One of the theories considered is the infections. Bacterial or viral causes are also considered. Among the viral causes, HSV is frequently blamed. In a study with regard to the diagnosis of Herpes Simplex, it was shown that the best diagnosis method was to look for HSV and DNA in the neural fluid taken during facial decompression (8). In our case, all these diseases and factors were examined; however, no findings were detected. Many authors who investigated the relation between FP and climate claimed that the frequency of FP increased in winter months. It was reported that be-

ing exposed to frequent or elongated cold might re-activate HSV-1, which is in the latent status in ganglion cells, leading to vasomotor changes in the facial area, or causing edematous neurite with reflex ischemia (9). Our case was consistent with the findings reported in the literature, and the disease appeared in December, one of the winter months.

There is no a definite treatment protocol for FP in pregnancy and postpartum period. Mostly, the methyl prednisolone treatment is preferred. It was reported in previous studies that the patients, who were followed after a treatment with 60 mg-80 mg a day for 7 and 10 days, responded to treatment after a few weeks. Treatment response was observed to be slower in pregnancy. In the literature, it was reported that methyl prednisolone was used and found to be effective, in pregnant cases, which also was the case in facial diplegia treatment (10). In our case, too, recovery was observed in the clinical presentation of the patient with methyl prednisolone treatment. No complications were detected.

Conclusion

Early postpartum period bilateral FP is extremely rare. Although generally its reason cannot be detected, the research of etiology must be conducted. Despite the available work, there is no consensus yet on its etiology, treatment, and prognosis. However, we believe that methyl prednisolone is a reliable choice of treatment in postpartum patients with bilateral FP.

Informed Consent: Written informed consent was obtained from the patients who participated in this study.

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References

1. Madhok V, Falk G, Fahey T, Sullivan FM. Prescribe prednisolone alone for Bell's palsy diagnosed within 72 hours of symptom onset. BMJ 2009; 338: b255. [CrossRef]
2. Özdemir HH, Demir CF, Berilgen MS, Balduz M, Kapan O. Pregnancy and facial diplegia: A rare case. Dicle Medical Journal 2012; 39: 419-21. [CrossRef]
3. Katz A, Sergienko R, Dior U, Wiznitzer A, Kaplan DM, Sheiner E. Bell's palsy during pregnancy: is it associated with adverse perinatal outcome? Laryngoscope 2011; 121: 1395-8. [CrossRef]
4. Kucur C, Özbay İ, Erdoğan O, Oğhan F, Yıldırım N. Tekrarlayan Periferik Fasiyal Paralizili Hastalarda Ayırıcı Tanı. Van Tıp Dergisi 2015; 22: 159-65.
5. Jain V, Deshmukh A, Gollomp S. Bilateral facial paralysis case presentation and discussion of differential diagnosis. J Gen Intern Med 2006; 21: 7-10. [CrossRef]
6. Kovacić J, Curcić I, Lajtman Z, Katić B. Bilateral Bell's palsy in a pregnant woman. Acta Med Croatica 1998; 52: 177- 9.
7. Kutluhan A, Çankaya H, Kıroğlu F, İçli M, Kırış M: Bilateral Kronik otitis mediadaüçyılaraylagelişen bilateral fascialparalysis: Olgusunumu. Van Tıp Dergisi 2001;8(1):32-5
8. Tsukaguchi M, Yamada A, Sasaki I, Deguchi K, Takeuchi H. A case of facial diplegia in associated with reactivation of herpes simplex virus type I. Rinsho Shinkeigaku 1995; 35: 70-2.
9. Campbell KE, Brundage JF. Effects of climate, latitude, and seasonvon the incidence of Bell's palsy in US Armed Forces, October 1997 to September 1999. Am J Epidemiol 2002; 156: 32-9. [CrossRef]
10. Mari I, PouchotJ,Grasland A, Vinceneux P. Facial diplegias during pregnancy. Presse Med 2000; 29: 2213-5.