A Mother and Child with Moebius Syndrome

Z. Ulaş Bali, Ayşen Usluer, Levent Yoleri
1 Ağrı State Hospital, Plastik Clinic of Plastic, Reconstructive and Aesthetic Surgery, Ağrı, Turkey
2 İzmir Dr. Behçet Uz Child Hospital, Clinic of Plastic, Reconstructive and Aesthetic Surgery, İzmir, Turkey
3 Department of Plastic, Reconstructive and Aesthetic Surgery, Celal Bayar University School of Medicine, Manisa, Turkey

Abstract

In this case report, we present the case of a 25-year-old male with familial Moebius syndrome having facial nerve paralysis; his mother had both facial nerve paralysis and sixth cranial nerve paralysis. He was admitted to our outpatient clinic with complaints of an unclosed left eye and a sagging left corner of the mouth. During preoperative procedures for the operation for the correction of facial paralysis, we noticed that his mother also had peripheral facial nerve and ipsilateral sixth cranial nerve paralysis simultaneously. Either patient underwent examinations and research considering the familial Moebius syndrome and its clinical findings. The male patient was operated with a modified temporal muscle transposition technique for lagophthalmos and tendon graft hanging and cross facial nerve graft (CFNG) with the sural nerve for the sagging mouth corner.

Keywords: Familial Moebius syndrome, facial paralysis, exotropia

INTRODUCTION

Möbius syndrome is a rare congenital condition in which a unilateral or bilateral paralysis of the seventh cranial nerve is accompanied by other cranial nerve palsies. It was first defined in 1888 by Möbius as combined paralysis of the sixth and seventh nerves. The condition can be concomitantly accompanied by limb anomalies, craniofacial malformations, autism, and pectoralis minor hypoplasia. Besides sporadic cases, familial Möbius cases have been reported.

Here we present the cases of a 25-year-old male patient and his mother, both of whom underwent surgery in our clinic for facial paralysis. The mother additionally presented with paralysis of the sixth nerve.

CASE REPORT

A 25-year-old male patient presented to our clinic with a complaint of inability to close the left eye and drooping of the left corner of the mouth. In his physical examination, left peripheral facial paralysis was noted along with exotropia of the right eye (Figures 1, 2). Magnetic resonance imaging (MRI) of the brain revealed ischemic changes in the frontal and parietal lobes of the left cerebral hemisphere. After the patient was hospitalized for surgery, his mother, who was accompanying him to the hospital, was observed to present with left peripheral facial paralysis and ipsilateral paralysis of the sixth cranial nerve (Figure 3). Scans of the mother revealed the presence of 5 meningiomas in the brain, and evaluation of her history revealed that a gold plate had been placed at an external clinic to treat lagophthalmos. Chromosome analyses were planned for evaluating Möbius syndrome in the patient and the mother; however, genetic examination could not be performed because the family did not consent. The male patient underwent surgery in which modified temporal muscle transposition was used for treating the lagophthalmos and tendon graft suspension and sural nerve cross facial nerve grafting (CFNG) were used for treating the drooping of the mouth. In the sixth postoperative month, the patient was able to close his left eye and satisfactory improve-

Cite this article as: Bali ZU, Usluer A, Yoleri L. A Mother and Child with Moebius Syndrome. Turk J Plast Surg 2017; 25(3): 147-149.

Correspondence Author: Dr. Z. Ulaş Bali E-mail: zulasbali@gmail.com

Content of this journal is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.
ment was achieved in his facial appearance (Figure 4). The patient was informed that his data would be published, and his consent was obtained.

**DISCUSSION**

Although the pathogenesis of Möbius syndrome remains controversial, the prevalent hypothesis is prenatal brain stem ischemia. Familial Möbius syndrome has been demonstrated to be autosomal dominant and associated with X-linked recessive inheritance. Reports are available that localize the Möbius syndrome-causing gene to chromosome 13q12.2.

---

**Figure 1.** View of patient with open eyes revealing exotropia in the right eye.

**Figure 2.** View of patient with closed eyes revealing lagophthalmos in the left eye.

**Figure 3.** View of the patient’s mother with paralyses of the sixth and seventh left cranial nerves.

**Figure 4.** In the sixth postoperative month, significant improvement was observed in the patient’s lagophthalmos and drooping end of the mouth.
The literature contains reports of cases that, in addition to facial paralysis, present with a range of cranial nerve and gaze palsies as well as variations in craniofacial anomalies. Although Scarpelli reported the presence of mental retardation at a rate of 10% to 15%, a study conducted by Verzijl in 2005 demonstrated no differences between healthy individuals and patients with Möbius syndrome with respect to mental and memory functions. In their 2011 series describing 46 patients with Möbius syndrome, Carta et al. reported large-angle exotropia and concomitant torticollis in addition to seventh nerve paralysis in 9% of the patients.

In our cases, the mother had ipsilateral paralyses of the sixth and seventh cranial nerves, while the son had left peripheral facial palsy along with contralateral exotropia and torticollis. In addition to these findings, the mother presented with meningiomas and the son presented with chronic ischemic changes in the frontal and parietal lobes. Both the patient and his mother had normal mental and memory functions.

CONCLUSION

Our purpose in presenting this case is to point out that Möbius syndrome can present with a diverse range of clinical findings and each individual can show different findings in familial cases as well as to emphasize that Möbius syndrome should be considered in differential diagnosis in patients who present with congenital facial paralysis.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

Peer-review: Externally peer-reviewed.


Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

REFERENCES