Journal of Dental Sciences (2016) 11, 107—109

Available online at www.sciencedirect.com

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journal homepage: www.e-jds.com

CORRESPONDENCE

Connective tissue massage accelerates recovery of facial nerve palsy after orthognathic surgery

Facial nerve palsy (FNP) is a rare complication resulting from orthognathic surgery. The reported incidence of FNP is 0.1—0.75%.[1] Most patients resume to original facial expression function within months under suitable managements.[2] Some existing comorbidities of patients may interfere with recovery, and other associated treatments must be considered.[3] A 31-year-old woman had previous poor posture related myofascial pain disorder (MPD) of the head and neck and facial asymmetry (Figure 1A). She received a bilateral intraoral ramus oblique osteotomy (BIORO) under general anesthesia and the procedure went very smoothly. On the next morning, she had difficulty in closing the left eye and the left side of her face drooped (Figure 1B and C). Stiffness and tenderness of the left neck and shoulder were also found. After physical examination and consultation with the neurologist, central type FNP was ruled out and peripheral FNP was considered. Moderate peripheral FNP due to soft tissue compression and recurrence of MPD were impressively diagnosed. Hence, we initiated physical therapy with a combination of steroids (prednisolone 45 mg/d for 2 days and tapered to prednisolone 5 mg, twice a day) and vitamin B-complex (1 capsule, 3 times a day) for 7 days. After connective tissue massage and posture adjustment on three occasions, the patient felt an obvious improvement of facial expression function (Figure 1D and E). The incomplete eyelid closure fully recovered on the 38th day after the operation. FNP after BIORO is rarely reported due to its relatively low risk of nerve damage.[3,4] In this case, the patient had MPD of the head and neck which did not present severe symptoms preoperatively. The FNP and recurrent MPD occurred after BIORO operation and rehabilitation therapy in the early period of FNP was applied. The patient completely recovered from FNP on the 38th day after the surgery and the recovery rate of this case was much faster than that reported in a previous study.[3] The rehabilitation treatments of this case included connective tissue massage and posture adjustment. We suggest that early neck and shoulder massage can accelerate recovery of facial nerve damage originating from soft tissue compression through the enhancement of venous-lymphatic circulation.[5]

http://dx.doi.org/10.1016/j.jds.2015.07.005

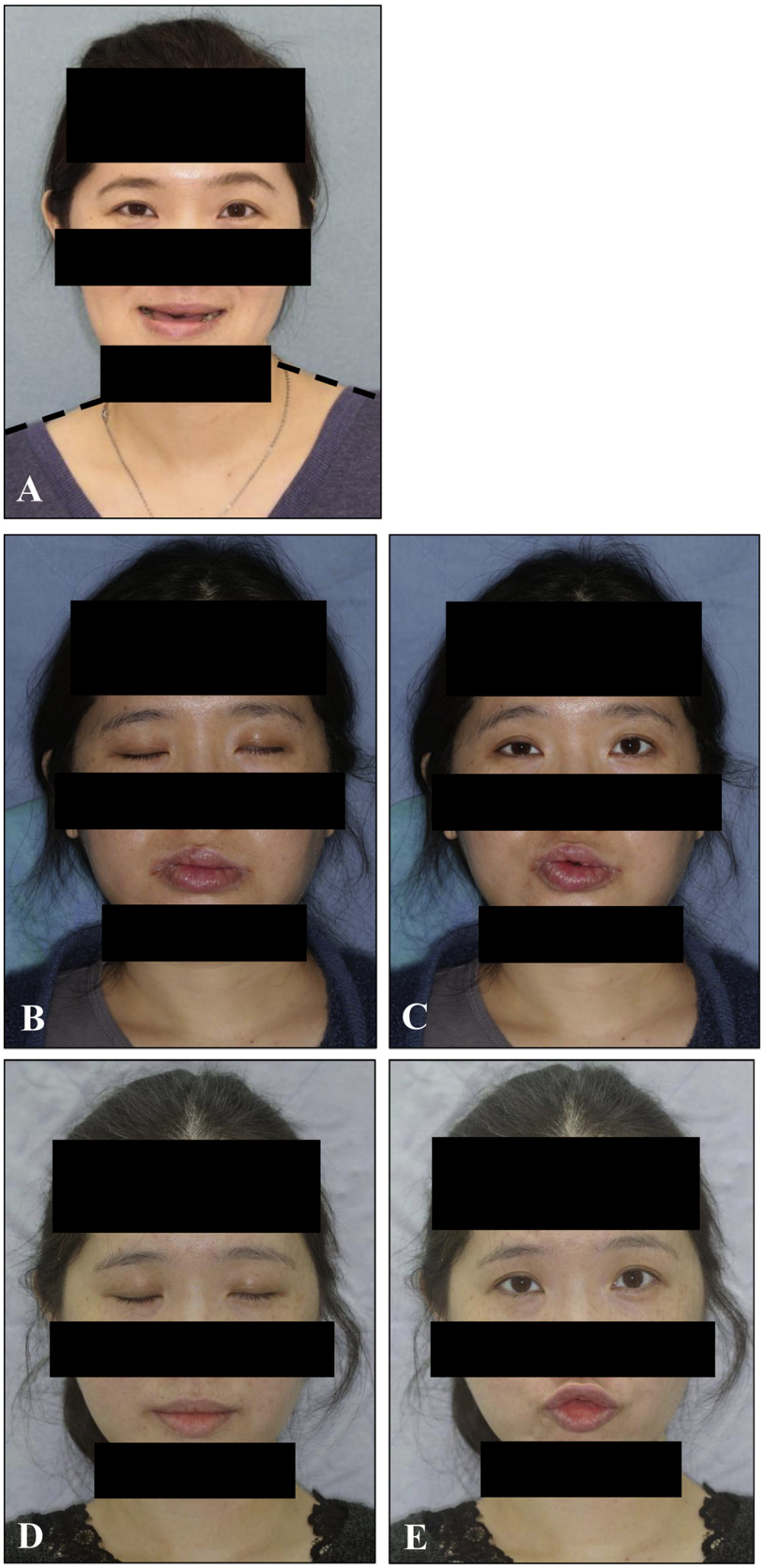

Figure 1 Clinical photographs of the patient. (A) Preoperative photograph demonstrating facial asymmetry and uneven shoulder line (broken line) indicating poor posture of the patient. The physical examination did not reveal presence of myofascial pain disorder; (B,C) the patient presented with bilateral facial swelling on the next morning after the surgery. She also had difficulties when closing the left eye and the left side of her face drooped; and (D,E) complete recovery of facial expression function on the 38th day postoperatively.

Conflicts of interest

The authors have no conflicts of interest relevant to this article.

References

1. de Vries K, Devriese PP, Hovinga J, van den Akker HP. Facial palsy after sagittal split osteotomies. A survey of 1747 sagittal split osteotomies. *J Craniomaxillofac Surg* 1993;21:50—3.
2. Lanigan DT, Hohn FI. Facial nerve injuries after sagittal split mandibular ramus osteotomies for advancement: a report of 2 cases and review of the literature. *J Oral Maxillofac Surg* 2004; 62:503—7.
3. Hsu HA, Chang YC, Lee SP, Chen YW. Myofascial pain syndrome may interfere with recovery of facial nerve palsy after orthognathic surgery—a case report. *J Oral Maxillofac Surg* 2012;70: e653—6.
4. Guralnick W, Kelly JP. Palsy of the facial nerve after intraoral oblique osteotomies of the mandible. *J Oral Surg* 1979;37:743.
5. Lindsay RW, Robinson M, Hadlock TA. Comprehensive facial rehabilitation improves function in people with facial paralysis: a 5-year experience at the Massachusetts Eye and Ear Infirmary. *Phys Ther* 2010;90:391—7.

Pai-Tai Tsai
Yen-Ching Chang
Yuan-Wu Chen*
Division of Oral and Maxillofacial Surgery, Department of Dentistry, Tri-Service General Hospital, Taipei City, Taiwan, ROC

Dental School, National Defense Medical Center, Taipei City, Taiwan, ROC

*Corresponding author. Division of Oral and Maxillofacial Surgery, Department of Dentistry, Tri-Service General Hospital, 2F, Number 325, Section 2, Chenggong Road, Neihu District, Taipei City 114, Taiwan, ROC.
E-mail address: h6183@yahoo.com.tw (Y.-W. Chen)

Received 17 June 2015
Final revision received 28 July 2015
Available online 18 November 2015