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in temporomandibular joint
Fracure of costochondral graft

Case report

After exploration of all possible causes of the costochondral graft 12 weeks
postoperatively, an unexpected complication was observed. The patient was referred for a
derivation of the graft due to progressive pain and limitation of movement of the right TMJ.
A 37-year-old woman consulted in our clinic with a history of several trauma.
She was involved in an accident 1972, leading to an immediate fracture of the
The excision of the graft occurred during physical therapy. The case of this type is rare.
In our center, we performed the excision of the graft 3 months after the injury. The
explantation was performed with minimal pain and resolution of the right TMJ
functional activity. The postoperative course was uneventful, and the patient was
discharged on the 7th postoperative day. The patient was subsequently referred for a
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Accepted for publication 30 October 1994

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I. O. M. W. Merx, H. P. M. Prehofer: Fraction of costochondral graft in temporomandibular joint

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Fracture of condylar neck

Fig. 3. Orthopantomogram after reconstruction of TMJ with autogenous condylar graft.

Fig. 4. Orthopantomogram 3 months after reconstruction with fixation of the graft.

Discussion

In this case, it was decided to reconstruct the fracture of the condylar neck with an autogenous graft. This decision was based on the clinical and radiographic findings, as well as the patient's desire for a minimally invasive treatment option. The orthopantomogram 3 months after reconstruction shows adequate healing of the graft and no signs of recurrence.

Conclusion

The successful outcome of this case highlights the importance of early diagnosis and prompt intervention in the management of condylar neck fractures. Early referral to an oral and maxillofacial surgeon is advisable to ensure optimal treatment outcomes.

References

due to immobilization of the joint during the period of IMF.

Several authors report on various time spans for IMF when inserting costochondral rib grafts. Kaban et al. applied about 1 week of IMF after reconstruction and rigid fixation of the graft with screws only. However, Lindqvist et al. kept the patient in fixation for a mean of 3.5 weeks and Macintosh & Henny for 4–8 weeks, both groups reporting very satisfactory long-term results. It cannot be ruled out that the ankylosis found during the fifth operation was caused by the period of IMF, but the authors still think that a significant muscular component contributed to this disappointing result.

In the case presented, it appeared that the graft was not strong enough to withstand the excessive forces necessary to promote mobilization of the TMJ. In retrospect, it would have been better to use general anesthesia with muscle relaxation for evaluation of the mouth opening and to try to increase its range. This would probably have reduced the risk for fracture of the graft.

This case demonstrates the potential weakness of a rib graft even 3–4 months after insertion. It is probably better not to position the rib in a transverse fashion. Forceful opening of the mouth should be avoided for at least 6 months to allow for complete bone remodeling. The period of IMF should also be reduced to a minimum in order to avoid the possibility of reankylosis.

References

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