

Trismus Release after Previous Free Flap Reconstruction: Surgical Approach for Severe Recurrent Cases

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Background and Purpose

The three most common causes of trismus are oral submucous fibrosis, orofacial gangrene in malnourished children and cancers of the head and neck.^{1, 2} Very often, they share the same triad: fibrosis of the soft tissue of the cheek, masticatory muscles and osseous overgrowth.³ In severe cases, this will eventually lead to severe pain, weight loss and poor oral hygiene.^{4, 5} The goal of this study is to describe a surgical algorithm for patients with recurrent trismus, who were previously treated with free tissue transfer.

Material and Methods

Between 2010 and 2015, all patients diagnosed and surgically treated for severe recurrent trismus (IO <15mm) were analyzed. Demographics, cause of trismus, history of radiation, prior flap used, pre and post surgery IO distance were recorded. In addition, release of the contracted oral mucosa, removal of the coronoid process, medial pterygoid tendon release, resection of the angle of the mandible, pseudojoint reconstruction and type of free flap used were analyzed.

Results

A total of 54 patients were diagnosed with severe recurrent trismus (IO<15mm). All 54 patients were male. Their average age was 43 yo (range: 27 to 68 yo). The most common cause of trismus in our population was cancer. 75% received preop radiation. All 54 patients underwent release of the contracted oral mucosa, 43 removal of the coronoid process, 47 medial pterygoid tendon release, 9 resection of the mandibular angle, 5 pseudojoint reconstruction. Among these cases, 7 were reconstructed using an ALT flap, 45 radial forearm flap and 2 with a medial sural flap. Pre and Post surgical IO were 7 (0-9) and 26 (18-32) mm respectively. Univariate analysis showed that the combination of surgical procedures such as release of the contracted oral mucosa ($p<0.04$), removal of the coronoid process ($p<0.03$), medial pterygoid tendon release ($p<0.05$), resection of the mandibular angle ($p<0.04$) and pseudojoint reconstruction ($p<0.05$) were associated with an overall improvement of the IO aperture.

Conclusion

Trismus is a debilitating disease with devastating consequences if not treated appropriately. Based on this experience, patients treated for severe recurrent disease should undergo a more aggressive surgical release in order to achieve a wider IO distance and relief of symptoms. However, further studies with a longer follow-up are required to rule out further recurrence.

References

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