USE OF TEMPORALIS FASCIA AS AN INTERPOSITIONAL ARTHROPLASTY IN TEMPOROMANDIBULAR JOINT ANKYLOSIS: ANALYSIS OF 8 CASES

To the Editor—We thank Dr Meyer for his comments and the editor for providing the opportunity to respond.

First, the purpose of this study was to evaluate the versatility of the temporals fascia in temporomandibular joint ankylosis. Various interposition arthroplasty materials have been proposed, with their advantages and disadvantages.

We agree that the use of an autogenous dermal graft and a bank costochondral graft as interpositional arthroplasty is not mentioned in our article. Harvesting dermal graft requires a second surgical site, and the use of bank costochondral cartilage in India is difficult because of its unavailability.

Second, all patients are periodically followed. Three of 8 patients had a follow-up shorter than 5 years. One patient with 4-year follow-up was seen 5 years 6 months postoperatively and the mouth opening was 34 mm, and 2 patients with 11-months follow-up were seen at 2 years 5 months postoperatively and their mouth openings were 36 and 38 mm, respectively.

Third, the primary objectives in the management of ankylosis surgery are 1) to establish jaw movement and jaw function by surgical release of the ankylosis and 2) to prevent relapse by interpositional grafting, early jaw mobilization, intensive physiotherapy, and strict follow-up to prevent postoperative adhesions. The key to the success of ankylosis surgery is to restore form and function. Form includes the esthetic correction of the facial deformity and occlusal corrections. Function includes adequate mouth opening without signs of reankylosis. In our study we emphasized restoring function first and form at a later date. Based on this, the emphasis was placed on adequate mouth opening. This was achieved postoperatively and is an indication of good function and no reankylosis.

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References

THE "MISSING" ANTERIOR LOOP

To the Editor—I write in response to a recent report by Benninger et al1 and would like to state my support for their findings. This is because one must remember that the anterior loop is a phenomenon usually seen in panoramic radiographs, and this can be attributed to seeing a 3-dimensional structure as a 2-dimensional shadow. Therefore, there is a possibility that the loop seen on panoramic radiographs might, in fact, be the result of variation in the division of the inferior alveolar nerve, as rightly pointed out by Benninger et al.1

To recapitulate, the inferior alveolar nerve comprises 2 large nerves that are spatially twisted around each other but separately wrapped in perineural sheaths.1 The point of division has always been a matter of debate, with some studies suggesting the presence of a loop anteriorly and then backward before branching out as the mental nerve. The findings from Benninger et al1 are in agreement with those reported by Gustinna Wadu et al,2 who also discovered in their cadaveric dissection that frequent anatomic variations are present in the intrabony course of the inferior alveolar nerve, and the branching to mental and incisive nerve might occur more posteriorly than generally anticipated.

I would like to draw the attention of the authors to an additional finding from Gustinna Wadu et al.3 They reported that the mandibular canal is not a well-corticated structure.4 In fact, they likened the radiographic “cortex” of the mandibular canal as the effect of “wire netting” on the trabecular bone. When the distance between the “wire netting” is short, it will be seen as a sclerotic margin radiographically. About 2 years ago, a study was performed in our institution to determine the radiographic visualization of the anterior loop in subjects of different age groups. We discovered that the visualization becomes worse as the age of the subjects increases.1 We found that the anterior loop was not visualized in 72.7% of the subjects aged 40 to 49 years or in 85% of the subjects aged older than 50 years. On the basis of the present (on older cadavers) and previous studies cited,1,2 I would like to hypothesize that an increase in age, with its accompanying increase in cortical porosity and the percentage of Haversian canals showing resorption, in addition to the chemical processing that preserves the cadavers, allows the inferior alveolar nerve and its intrabony branches some degrees of shrinkage or displacement, resulting in intrabony movement and displacement of the anterior loop. As a result, the anterior loop, if it was ever present earlier, might no longer be seen during dissection or detected radiographically because of the change in position.

In summary, however, it is that perhaps the findings of Benninger et al1 and others, such as the findings from Rosenquist5 might have been the truth all this while, and the anterior loop is perhaps merely a radiographic phenomenon, such as suggested by Bavitz et al.6

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