SURGICAL MANAGEMENT OF RECURRENT TEMPOROMANDIBULAR JOINT DISLOCATION

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ABSTRACT

12 cases of recurrent temporomandibular joint dislocation were managed surgically with dermis Sling operation at AFID Rawalpindi during 1987-1996. All the cases were dealt with conservatively first with pericapsular autologus blood injection, but the response was not satisfactory. These cases were treated under general anesthesia. The postoperative recoveries were uneventful. Dislocation of condyle did not reoccur. 5 years follow up of all the patients showed normal mouth opening.

Key words: TMJ, recurrent, dislocation, and Dermis sling.

INTRODUCTION

Dislocation of the condyle is a common problem that is seen in emergency room where patients present with inability/difficulty in closing the mouth. The condylar dislocation occur as combination of three factors; laxity of mandibular and capsular ligaments, large bony eminence, and muscle spasm. There are reports in literature of many surgical and non-surgical techniques ranging from injection of various sclerosing agents in TM Joint spaces up to down fracture of zygomatic arch to avoid dislocation of TM joint. The aim of this study was to introduce the simplest, safest, and easiest method of surgical intervention where the flap becomes an integral part of the joint component; rather an extra ligament and does not allow the head of the condyle to move beyond its physiological limit.

MATERIALS AND METHODS

12 cases (5 female & 7 males) of recurrent (fixed) dislocation of temporomandibular joint were selected and treated with dermis, sling operation at AFID during 1987 —1996. These cases failed to respond to conservative method of autologus blood injection in TMJ spaces. The average age of the patient was 47 years ranging from 41 to 55 years. Two patients gave the history of prolonged dental treatment. Three patients were suffering from epilepsy. Two female patients gave the history of delivery. Two patients (one male and one female) were found suffering from muscular neuropathy. The male was a taxi driver while the female was a housewife. In remaining three patients the attack occurred during yawning.

METHODS

For better understanding of the procedure photographic illustration of one case is presented here;

Fig 1. Patient X reported with fixed dislocation of TM Joint where the incisal edge distance was 51mm (reference value 40m

Fig 2. Reduction was carried out by placing the thumbs on occlusal surfaces of mandibular molars and the rest of three fingers were placed around the inferior border of mandible. Pressure was applied down wards, backwards and upwards over.
**Fig 3.** Look of the patient after reduction of TM joint dislocation.

**Fig 4.** Application of barrel bandage to avoid redislocation till definitive treatment.

**Fig 5.** Under G-A in aseptic conditions a four cm long and 1 cm wide pedunculated flap comprising of skin, subcutaneous tissue and fat was raised in front of the ear.

**Fig 6.** The epidermis was removed from the flap leaving the dermis and subcutaneous tissue.

**Fig 7.** TM Joint was opened and a tunnel was made in front of the Condylar process between condylar and coronoid process. The silk was passed in awl and the whole flap was drawn towards the oral cavity. It was stitched with the oral mucosa.

**Fig 8.** The wound was closed layer by layer. Intermaxillary fixation was done for 03 weeks.

End result of the operation was that the dermis sling produces mechanical obstruction in the path of the condylar movements and does not allow the head of the condyle to move beyond its physiological limit.

**Fig 9.** One year after the treatment.

**RESULTS**

All the patients were followed for five years. The response was excellent and there was no recurrence of dislocation. The mouth opening was normal.

**DISCUSSION**

Update methods of surgical procedures for the treatment of recurrent TMJ dislocation include pedunculated flap removed from temporalis and stitching it with the joint capsule (Wasmund 1927), similarly oval excision of lateral pterygoid muscles (Flohr 1955), oval excision of cheek mucosa in front of ascending ramus (Hermann 1955), oval excision of joint capsule (Neuner 1973), osteoplastic repair of articular tubercle (Becher 1959), Rehmann 1954 & 1956, (Traunar 1972), dermis sling operation in front of the tragus of the ear (Kole 1973) to provide mechanical obstruction.

None of the above mentioned treatment modalities proved ever lasting or free of complications. The
Fig. 5. Under GA wide pedunculated flaps was raised in front of the ear.

Fig. 6. Epidermis was removed from the flap.

Fig. 7. T. M Joint was opened.

Fig. 8. The wound was closed layer by layer.

Fig. 9. One year after the operation.

End Result of the Operation.
dermis sling operation first introduced by Heinz Kole & Graz in 1973 was found to be simplest, safest & comparatively more useful procedure requiring no special instrument, or skill. We treated 12 cases of recurrent (fixed) dislocation of TMJ since 1987 with dermis sling operation. In 9 patients the procedure was performed bilaterally, while in 3 cases it was done on one side. None of the patient reported with recurrence in 5 years follow up. Postoperatively intermaxillary fixation was carried out in 10 cases with tie wires while in the epileptic patients condylar movements were restricted by chin-head cap. The only complication noticed in the first three cases was mild infection, which was thought to be due to hair follicle incorporated in the flap. Due care was given to this point in the remaining 09 patients.

The flap raised in front of the tragus of the ear comprising of dermis & fatty tissue acts as an extra ligament and does not allow the condyle to move beyond its physiological limits. Mouth opening at the end of follow up was between 35-40mm, scar on the operated side was practically not visible.

CONCLUSION

Treatment of fixed recurrent dislocation of TMJ is possible only through surgical intervention. Several methods have been tried during the last few decades but none of them was found so fruitful to be practiced for longer durations. We have used almost all these methods at AFID and reached to the conclusion that dermis sling operation should be reintroduced and be given priority for the treatment of fixed recurrent dislocation as in our opinion the method is safest, simplest and provides 100 % success.

REFERENCES