

INTRA-ARTICULAR MENISCUS DYSFUNCTION SURGERY  
— A REPORT OF CASE —

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측두악관절 내장증의 외과적 치험례

— 관절원판 성형수술 및 측두관절 결절절제술 —

국군수도병원

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...>국문초록<.....

우측 측두악관절에 동통과 연발음을 수반한 개구장애 및 저작장애를 호소하는 환자에 있어서 측두 악관절조영술을 하므로써 관절원판부의 천공과 관절원판의 전방전위의 악관절내장증으로 진단하였으며, 악관절원판부의 성형술과 측두악관절 결절의 절제술을 시행하였다. 수술 후 8 주부터 최대개구가 4.5cm이었으며 측두악관절의 원활한 운동으로 별 불편없이 저작 및 개구운동이 가능하게 되었다.

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Signs and symptoms of temporomandibular joint dysfunction are a common clinical problem variably reported to affect 4% – 28% of the adult population in recent random survey.<sup>1)</sup> The patients most frequently have preauricular pain, joint noise, masticatory muscle tenderness and locking of the jaw.<sup>9)</sup> In the 1970's, Wilkes and Farrar renewed interest in intra-articular structural disorders of the TMJ by refining the use of arthrography used first clinically by Toller in 1974. Internal derangement of TMJ is the result of uncoordinated function of the meniscus, condyle, articular eminence, and superior head of the lateral pterygoid muscle.

This is a case report of intra-articular meniscus dysfunction (internal derangement) treated by meniscopectomy and eminectomy.

the sensation of tightness in masticatory muscles is generalized over the affected side. It is unusual for these patients to describe the locking which is so prominent in the patient with intra-articular meniscus dysfunction.

In a patient with intra-articular meniscus dysfunction, palpation laterally and intrameatally over an affected joint elicits pain. This is not a common finding in extra-articular conditions. In contrast, masticatory muscle spasm tenderness in both conditions is present and easily elicited by palpation over the affected muscles.

The patient in this report had sharp preauricular pain, joint noises (clicking and especially crepitus), and locking of the jaw, and muscle tenderness.

Dolwick<sup>4</sup>), Katzberg<sup>6</sup>), Bronstein<sup>3</sup>), Blaschke<sup>2</sup>), Lynch<sup>8</sup>) Farrar and McCarthy<sup>5</sup>) concluded that arthrotomograph was an effective method of assessing the anatomical internal derangement of soft tissue structure which were significant factors in temporomandibular joint dysfunction. The arthrotomogram (figure-1) in this report apparently showed meniscal perforation in the bilaminar zone and meniscal anterior displacement without reduction. Meniscal perforation is readily diagnosed by simultaneously opacification of the upper joint space with injection of contrast medium into the lower joint space. The most frequent site of perforation is in the region of the bilaminar zone.

In meniscus displacement without reduction, the entire meniscus is located forward of the condyle (figure-1,A). The anterior tear drop of the lower joint space is larger and more horizontally directed than in the normal arthrotomogram.

Management of intra-articular meniscus dysfunction, although surgical, must be part of a multifaceted program of treatment, including occlusal therapy and physiotherapy, to decrease the upward and backward position of the condyle, and psychotherapy or stress reduction therapy, to reduce further the effects of parafunctional stress on the joint apparatus. The diagnostic criteria for surgery of the joint were established to satisfy these: pain, dysfunction, joint noises, a positive arthrotomogram, and lack of positive response to nonsurgical treatment.

Many incisions for approaching the temporomandibular joint have been proposed. The great difficulty is to provide adequate exposure without injuring the facial nerve. The preauricular incision was used in this case. By making the anterior flap composed of skin, superficial fascia, periosteum on the zygomatic arch, and parotidio-masseteric fascia, author could avoid injuring the zygomatic and frontal branches of the facial nerve.<sup>7)</sup>

As for surgery of temporomandibular joint, there are a few methods: high condylectomy, arthroplasty (condylar shaving), menisectomy, eminectomy, meniscoplasty et al. The surgical management in this case was composed of meniscoplasty and eminectomy. In the meniscoplasty, authors folded and sutured the bilaminar zone with nonabsorbable suture, Mersilene. Eminectomy removed the broadest surface over which the meniscus must move, thus allowing smooth function. And because the condylar head was very sound, the arthroplasty was not performed. Mercuri<sup>10)</sup> concluded that surgical intervention, with correction of eminence, condyle, and posterior meniscus attachment seemed to yield the best result.

## SUMMARY

A male patient had suffered from preauricular pain, joint noise (clicking and crepitus), locking of the jaw, and masticatory muscle tenderness. He was diagnosed as intra-articular meniscus dysfunction from his sign and symptoms, history (recent trauma on the chin), and arthrotomogram. The perforated bilaminar zone was repaired and anteriorly displaced meniscus was repositioned to normal position, and eminectomy was done. After 8 weeks, the sign and symptoms were relieved and maximal mouth opening was 4.5cm, and also he could masticate hard bolus without discomfort.

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