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Arthroscopic treatment of osteochondritis dissecans of the knee joint

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Diz eklemindeki osteokondritis dissekansın artroskopik tedavisi

13 hastanın artroskopik olarak tedavi edilen osteokondritis dissekanslı 13 dizi ortalama 28 ay izlendi. 11 hastada mükemmel, 1 hastada iyi ve 1 hastada orta sonuç elde edildi. Bu nedenle diz osteokondritis dissekansında artroskopik tedavinin güvenli, basit ve etkin bir tedavi yöntemi olduğu düşüncesindeyiz.

Anahtar kelimeler: *Osteokondritis dissekans, artroskopi, diz eklemi*

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Thirteen knees of thirteen adult patients with osteochonritis dissecans treated arthroscopically were followed for a mean period of tweenty eight monts. Eleven had excellent, one had good, and one had fair result. We found that arthroscopic treatment of osteochondritis dissecans is a safe, simple, and effective intervention.

Key words: *Osteochondritis dissecans, arthroscopy, knee joint.*

Osteochondritis dissecans of the knee joint is described by P. Aichoth as"the proess whereby a segment of cartillage together with subchondral bone seperates from an articular surface" (1). The lesions is most commonly found in the knee joint and is usually unilateral.

Although König was the first to offer the term "osteochhondritis dissecans in 1887 (2), and even by him the name was recognised inappropriate.Ambroise Pare, must probably be credited as the first to recognise and to report the first surgical removal of a body from the knee joint (1)

There are several theories on the pathogenesis of OCD. As many patients with OCD of the knee joint are showing remarkable prowness at athletics, many authors suggested trauma as the most impotant factor in the pathogenesis of OCD (5, 6, 10). Some authors reported abnormalities of ossification of the epiphyseal cartilage as an etiologic factor in OCD (3, 7, 9, 11). Enneking noter poor anastomosis network of the subchondral bone and suggested ischemia was likely to be the etiologic factor (11). Although numerous studies have been done on OCD, its precise aetiology still remains controversial and further experimental and clinical research is needed to resolve this controversy. OCD commonly occurs in children and adolescents and predominantly affects the lateral aspect of the medial femoral condyle. The most common presenting complaint is pain followed by locking and recurrent sweling. Examination reveals localised tenderness, effusion, crepitus, quadriceps atrophy, and on are occasions, quadriceps atrophy, and on rare occasions, a detached loose body can be palpated.

Well, circumscribed fragment can be observed on plain radiographs, and arthrograpy, double contrast artho-tomography, radioisotope bone scanning, computed tomographic scanning and magnetic resonance imagings are useful for the evaluation of this lesion.

The management of OCD depends on skeletal maturity and the stage of the lesion. Immobilisation and restriction of activity (12), open screw or pin fixation (13), arthroscopic screw fixation (14), and arthroscopic curettage followed by grafting and fixation (15) are among the far too many treatment options, but a valid comparison between the different modalities of treatment is not possible as there is no universal documentation system.

In this study, we report the mid-term follow-up of thirteen adult patients with OCD of the knee.

Patients and methods

Thirteen patients with a mean age of twentytwo years, ranging bekween fifteen and fodty years form the basis of this study. Eight of these were male and five were female. Detailed reconds of their clinical, arthroscopic and radiological features were kept.

The average follow-up was twenty-eight months. all patients were assessed using Hughston scoring system (9) (Table 1). Five of the patients had a fragment showing early separation (Grade II), three patients had a partially attached lesion (Grade III) and five patients had a crater lesion (Grade IV) (5). In the five patients with Grade II lesion forage was performed (18). In three patients with Grade III lesion curet-

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tage was followed by fixation (14, 15). and in five patients with Grade IV lesions excision was followed by forage (18.

Rating	Score	Criteria
Excellent	4	No limitation of activity No symptoms Examination normal
Good	3	Mild aching on strenuous activity Examination normal Radiolographs show healed defect or residual sclerosis
Fair	2	Mild aching and swelling on strenuous activity Radiographs show flattening of the condyle but normal joint space
Poor	1	Pain and swelling on mild activity Tenderness Loss of 20° of motion 0 to 2.5 cm of thing atrophy Radiographs show irregularity of the condyle and narrowed joint
Failure	0	Pain and swelling with no activity Tenderness Loss of more than 20° of motion More than 2.5 cm of thigh atrophy Radiographs show absent joint space

Table 1: Scoring system as descrbed by Hughston (1984)

Results

The most common presenting complaint was pain (thirteen patients), followed by giving way (five patients) and locking (three patients).

Excellent results were obtained in most of the cases. One patient with mild aching had a good results and another patient with ACL laxity and mild aching had a fair result.

X-ray examination of the patients at follow-up visits did not reveal any sing of degenerative changes until this study was concluded.At the only secord look artroskopi in this seriesof a patient with an osteochondral fragment fixed with three K-wire,the fragment was stable and no additional pathology was found.The have been minimal effusions in four patients,which resolved spontaneously by the third week.No evidence of acutae or late infection was observed and loss of range of movement occurred at the last follow-up visit in any patients.

Discussion

OCD lesions of the knee in patients nearing or past skeletal maturity are less likely to heal spontane ously than in children,which tend to heal with conservative treatment.There,an aggressive approach is appropriate in adult patients.The use of MRI scan can be helpful in the assessment of Grade I or healing lesions.But more advanced lesions should be evaluated and treated arthroscopically.Although we do not recommend the routine use of costly studies may be of value at 3 to 4 years follow-up.Arthroscopy gives the most accurate assessment of the integrity of the articular cartilage and the mobility of the osteochodral fragment.

Grade III lesion should be arthroscopically fiwed securely using K-wires,3,5 cancellous AO screws or Herbert screws or other modalities of internal fixation.Guhl recommends surgical treatment of lesions greater then 1 cm(18)and the aim of surgery is to enhance vascularity.Although we are still waiting for the late results after three types of arthroscopic treatment according to Aichroth(!),our study suggests that arthroscopic assessment of OCD of the knee is a simple,safe and effective procedure.

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