
Global Osteochondritis Dissecans of the Lateral Femoral Condyle Treated by Herbert Screw Fixation

Chung-Da Wu, MD
Bernard R. Bach, Jr, MD

ABSTRACT: *This article describes the use of the Herbert (Zimmer Inc, Warsaw, Indiana) compression screw in the fixation of loose fragments in two adult patients with global osteochondritis dissecans of the lateral femoral condyle.*

Introduction

Treatment of osteochondritis dissecans has challenged orthopedic surgeons throughout the 20th century. Spontaneous healing may occur in young patients, and conservative treatment will yield favorable results.^{3,5,15,19-30} In adult patients, however, separation and failure of healing may lead to fragmentation, loose body formation, and degenerative changes.^{3,5,9} Consequently, surgical intervention is frequently necessary. The problem, however, is choosing the most appropriate surgical method to treat this disease.

Excision of the loose fragment, drilling of the

defect, internal fixation of the fragment with pins, Kirschner wires, screws, and bone pegs have been used to treat this entity.* Recently, arthroscopically assisted techniques have been described.^{6,8,17,20,27} Anatomic restoration of the weightbearing articular surface should be attempted whenever possible.^{18,23} Experimental and clinical studies have demonstrated that replacement and fixation of large lesions on the weightbearing surface yield the best results.^{5,9,10,18,20,23,24,27}

This article describes the use of the Herbert compression screw in the fixation of loose fragments in two adult patients with global osteochondritis dissecans of the lateral femoral condyle.

Case Reports

Case 1. A 22-year-old intercollegiate cheerleader and former gymnast experienced a full ache in his right knee for 20 months. Four months prior to his presentation, he injured the knee with a twisting motion. He continued to have knee pain and recurrent swelling. The knee gave way several times, and he also experienced pseudolocking (being unable to flex the knee beyond 90°). Examination of the right knee revealed a minimal effusion. There was 3 cm of right quadriceps atrophy. He had full range of motion from 0° to 140°. There was anterolateral and lateral joint line tenderness. With attempted McMurray test, a clicking in the lateral aspect of the knee was felt. A tunnel radio-

From the Sports Medicine Section, Rush-Presbyterian-St Luke's Medical Center, Chicago, Illinois, and the Department of Orthopaedic Surgery, Taiwan Provincial Tao-Yuan General Hospital, Taiwan, China.

Reprint requests: Bernard R. Bach, Jr, MD, Sports Medicine Section, Rush-Presbyterian-St Luke's Medical Ctr, 1725 W Harrison St, Ste 439, Chicago, IL 60612.

*4-6, 8, 9, 13, 14, 17-19, 23, 24, 26, 27.

- Orthop Scand.* 1980;51:389-398.
8. Mirra JM, ed. *Bone Tumors: Diagnosis and Treatment*. Philadelphia, Pa: JB Lippincott Co; 1982.
 9. Ochsner SF. Eosinophilic granuloma of bone; experience with 20 cases. *AJR Am J Roentgenol.* 1966;97:719-726.
 10. Sartoris DJ, Parker BR. Histiocytosis X: rate and pattern of resolution of osseous lesions. *Radiology.* 1984;152:679-684.
 11. Sherk HH, Nicholson JT, Nixon JE. Vertebra plana and eosinophilic granuloma of the cervical spine in children. *Spine.* 1978;3:116-121.
 12. Silberstein MJ, Sundaram M, Akbarnia B, Luisiri A, McGuire M. Eosinophilic granuloma of the spine. *Orthopedics.* 1985;8:267-274.
 13. Stern MB, Cassidy R, Mirra J. Eosinophilic granuloma of the proximal tibial epiphysis. *Clin Orthop.* 1976;118:153-156.
 14. Takahashi M, Martel W, Oberman HA. The variable roentgenographic appearance of idiopathic histiocytosis. *Clin Radiol.* 1966;17:48-53.
 15. Usui M, Matsuno T, Kobayashi M, Yagi T, Sasaki T, Ishii S. Eosinophilic granuloma of the growing epiphysis. A case report and review of the literature. *Clin Orthop.* 1983;176:201-205.
 16. The Writing Group of the Histiocyte Society. Histiocytosis syndromes in children. *Lancet.* 1987;1:208-209.

Editorial Discussion

KNEE SURGERY: Few radiologists would include eosinophilic granuloma in their differential diagno-

sis. Why isn't eosinophilic granuloma considered a multicystic osteomyelitis?

Maffulli et al: In the present case, the diagnosis was made following open biopsy and curettage, and the physical signs were not suggestive of an osteomyelitis. In particular, although the left medial femoral condyle was painful, the swelling was not tender, did not interfere with the normal range of movement, and had not increased in size since its appearance. A complete blood cell count and erythrocyte sedimentation rate were normal, and the child was otherwise healthy. Radiographically, no periosteal reaction was seen. Computed tomography scanning revealed that the cortex was breached anteriorly, but only some soft tissue involvement was evident. Had this happened in an osteomyelitis, the clinical picture would have been dramatic, with septic arthritis and possible formation of a discharging sinus. We believe that the diagnosis of eosinophilic granuloma cannot be made using radiography alone—a biopsy is mandatory.

