

Surgery for Osteoarthritis of the Knee Proved Worthless

Warren Hammer, MS, DC, DABCO

Arthroscopic surgery on the knee for the symptoms of pain and stiffness due to osteoarthritis is performed on at least 225,000 middle-aged and older Americans each year at a cost of more than a billion dollars to Medicare, the Department of Veterans Affairs and private insurers.¹ When medical conservative treatment does not relieve osteoarthritic knee pain, procedures such as arthroscopic lavage or debridement are often used. Over 650,000 such procedures are performed each year² at a cost of about \$5,000 each.

The *New England Journal of Medicine* reported on the results of a randomized, placebo-controlled trial to evaluate the efficacy of arthroscopy for osteoarthritis of the knee.³ One hundred eighty patients with osteoarthritis of the knee were randomly assigned to receive arthroscopic debridement, arthroscopic lavage or placebo surgery. The placebo group received only skin incisions and underwent a simulated arthroscopic operation but the arthroscope was not inserted.³ The patients in the study were informed that they might not receive actual surgery. The placebo group received a short-acting intravenous tranquilizer while the surgical group received the standard general anesthesia. The placebo patients were kept in the operating room for the same amount of time as the surgical patients, and spent the night after the procedure in the hospital being cared for by nurses who "were unaware of the treatment-group assignment."³

All patients received the same walking aids, graduated exercise and analgesics. For placebo patients, during the "operation" the surgeon asked for all instruments and manipulated the knee as if arthroscopy were being performed.³ Even saline was splashed to simulate the sounds of lavage in case the patient was partly conscious. The surgical patients were lavaged with at least 10 liters of fluid to flush and cleanse the knee of painful debris and inflammatory enzymes. Torn portions of meniscus were removed, and the remaining meniscus was smoothed to a firm, stable rim. Rough articular cartilage was shaved, loose debris was removed, and any bone spurs on the tibial spine that blocked full extension were also shaved smooth.

One surgeon was used, who did not know the procedure until he opened an envelope at the time of the operation. The surgeon was board-certified; trained in arthroscopy and sports medicine (fellowships); in practice for 10 years in an academic medical center; and currently the orthopedic surgeon for a National Basketball Association team. He was also the physician for the men's and women's U.S. Olympic basketball teams in 1996.

The patients were assessed before the study and two weeks; six weeks; three months; six months; 12 months; 18 months; and 24 months after the procedure. The authors of the study even determined whether there may have been some clinically important benefits they may have missed in the surgical group due to their small sample size. For the comparisons they questioned, the 95 percent confidence intervals did not contain any important differences, indicating that there was not a clinically important improvement the study had simply failed to detect.³

The final conclusion was "the outcomes after arthroscopic lavage or arthroscopic debridement were no better than those after a placebo procedure."³ Placebo studies on surgical procedures are rare since patients could undergo risks with no possibility of benefit. Dr. Kenneth Fine, an orthopedic surgeon at the George Washington University School of Medicine, said the procedure had long seemed to do nothing for patients' "underlying arthritis."¹

"There's a pretty good-sized industry out there that is performing this surgery," Dr. Felton noted. "It constitutes a good part of the livelihood of some orthopedic surgeons. That is a reality."

References

1. Kolata G. Arthritis surgery in ailing knees is cited as sham. *New York Times*, July 11, 2002:A1.
2. Owings MF, Kozak LJ. *Ambulatory and Inpatient Procedures in the United States*, 1996. *Vital and Health Statistics*, Series 13. No. 139. Hyattsville, MD. National Center for Health Statistics, November 1998 (DHHS publication (PHS) 99-1710. In: Moseley JB, O'Malley K, Petersen NJ, et al. *New England Journal of Medicine* 347(2):7/11/02:81-88.
3. Moseley JB, O'Malley K, Petersen NJ, et al. A controlled trial of arthroscopic surgery for osteoarthritis of the knee. *New England Journal of Medicine* 347(2):7/11/02:81-88.

Warren Hammer,MS,DC,DABCO
Norwalk, Connecticut
softissu@optonline.net

SEPTEMBER 2002