A controlled trial of arthroscopic surgery for osteoarthritis of the knee.

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FROM ABSTRACT:

BACKGROUND:
Many patients report symptomatic relief after undergoing arthroscopy of the knee for osteoarthritis, but it is unclear how the procedure achieves this result.

We conducted a randomized, placebo-controlled trial to evaluate the efficacy of arthroscopy for osteoarthritis of the knee.

METHODS:
A total of 180 patients with osteoarthritis of the knee were randomly assigned to receive arthroscopic debridement, arthroscopic lavage, or placebo surgery.

Patients in the placebo group received skin incisions and underwent a simulated debridement without insertion of the arthroscope.

Patients and assessors of outcome were blinded to the treatment-group assignment.

Outcomes were assessed at multiple points over a 24-month period with the use of five self-reported scores--three on scales for pain and two on scales for function--and one objective test of walking and stair climbing. A total of 165 patients completed the trial.

RESULTS:
At no point did either of the intervention groups report less pain or better function than the placebo group.

For example, mean (+/-SD) scores on the Knee-Specific Pain Scale (range, 0 to 100, with higher scores indicating more severe pain) were similar in the placebo, lavage, and debridement groups: 48.9+/-21.9, 54.8+/-19.8, and 51.7+/-22.4, respectively, at one year and 51.6+/-23.7, 53.7+/-23.7, and 51.4+/-23.2, respectively, at two years.

Furthermore, the 95 percent confidence intervals for the differences between the placebo group and the intervention groups exclude any clinically meaningful difference.

CONCLUSIONS:
In this controlled trial involving patients with osteoarthritis of the knee, the outcomes after arthroscopic lavage or arthroscopic debridement were no better than those after a placebo procedure.

THESE AUTHORS ALSO NOTE:

"When medical therapy fails to relieve the pain of osteoarthritis of the knee, arthroscopic lavage or débridement is often recommended."

"More than 650,000 such procedures are performed each year at a cost of roughly $5,000 each." **[650.000 X $5000 = 3 billion 250 million per year]**

There is no evidence that arthroscopy cures or arrests knee osteoarthritis.

Therefore, the authors conducted this randomized, placebo-controlled trial to assess the efficacy of arthroscopic surgery of the knee in relieving pain and improving function.

In this group of 180 patients, after receiving either lavage (n = 61), debridement (n = 58), or placebo (fake debridement with standard incisions, n = 60), the patients were evaluated at 2 weeks, 6 weeks, 6 months, 12 months, 18 months, and 24 months.

RESULTS

At no point did either the lavage group or the debridement group have greater pain relief than the placebo group.

At no time did the lavage group or the debridement group have greater improvement in function than the placebo group.

"Objectively measured walking and stair climbing were poorer in the debridement group than in the placebo group at 2 weeks and 1 year and showed a trend toward worse functioning at 2 years."

DISCUSSION

This study provides strong evidence that arthroscopic lavage with or without débridement is not better than a placebo procedure in improving knee pain and function.

"Indeed, at some points during follow-up, objective function was significantly worse in the débridement group than in the placebo group."

Arthroscopy is the most commonly performed type of orthopedic surgery, and the knee is by far the most common joint on which it is performed.

In a previous double-blind, randomized, controlled trial of knee arthroscopy, patients were followed for 1 year, the control group had equal improvement in function to the lavage group at 12 months, "although the report interprets the study as having proved the efficacy of lavage." **[WOW!]**

This study found "that outcomes after arthroscopic treatment are no better than those after a placebo procedure."

All the surgeries in this study were done by 1 surgeon, who is board-certified, fellowship-trained in arthroscopy and sports medicine, has been in practice for 10 years in an academic medical center, is currently the orthopedic surgeon for a National Basketball Association team, and was the men's and woman's US Olympic basketball team physician in 1996.

"If the efficacy of arthroscopic lavage or débridement in patients with osteoarthritis of the knee is no greater than that of placebo surgery, the billions of dollars spent on such procedures annually might be put to better use."

"Health care researchers should not underestimate the placebo effect, regardless of its mechanism."

THIS ARTICLE GENERATED THE FOLLOWING EDITORIAL, in part:

DÉBRIDEMENT AND LAVAGE FOR OSTEOARTHRITIS OF THE KNEE
DAVID T.FELSON, M.D., M.P.H. and JOSEPH BUCKWALTER, M.D.

Patients with osteoarthritis of the knee have not had great benefit from medical treatments.

Therefore, lavage of the joint and débridement have become popular interventions.

Lavage removes debris such as microscopic or macroscopic fragments of cartilage that may induce synovitis and pain, and remove calcium phosphate crystals.

"Débridement consists of smoothing rough, fibrillated articular and meniscal surfaces, shaving tibial-spine osteophytes that interfere with the motion of the joint, and removing inflamed synovium."

"There is little evidence that removing or repairing stable, nondisplaced meniscal tears, or performing other elements of conventional débridement surgery, favorably affects the course of osteoarthritis."

"Malaligned knees may not respond well to arthroscopic debridement."
[WOW!, can you believe that statement?]

"Despite their current popularity, lavage and debridement are probably not efficacious as treatments for most persons with osteoarthritis of the knee."

"Although the debris in osteoarthritic joints may be related to synovitis, the results of this trial suggest that the effects of this debris on clinical symptoms are negligible."

"Although smoothing cartilage and meniscal irregularities may sound appealing, larger forces within and outside the joint environment, such as malalignment, muscle weakness, instability, and obesity, which are not addressed by this type of surgery, may have greater effects on the clinical outcomes of osteoarthritis of the knee." **[WOW, again, the "malalignment" word]**

"Débridement and lavage may simply remove some of the evidence while the destructive forces of osteoarthritis continue to work."

KEY POINTS FROM DAN MURPHY
(1) Arthroscopy (débridement and lavage) is the most commonly performed type of orthopedic surgery, and the knee is by far the most common joint on which it is performed.

(2) Arthroscopy is done more than 650,000 times yearly, costing $5,000 each, for a total cost of 3 billion 250 million dollars per year ($3,250,000,000).

(3) There is no evidence that arthroscopy cures or arrests knee osteoarthritis.

(4) Medical therapy (drugs) often fails to relieve the pain of knee osteoarthritis and then arthroscopic lavage or débridement is often recommended.

(5) In this study, at no time did the lavage or debridement group have greater improvement in pain or function than the placebo group, and was usually worse.

(6) This study provides strong evidence that arthroscopic lavage and débridement is not better than a placebo procedure in improving knee pain and function.

(7) The pain and dysfunction of the osteoarthritic knee may not be from the tears, debris, and inflammation, but rather from malalignment, muscle weakness, instability, and obesity.

(8) Débridement and lavage do not alter the destructive forces of osteoarthritis.

(9) The placebo effect is real and important.