

Wrist Fusion Offers Best Option for Kienböck's

BY NANCY WALSH
New York Bureau

NEW YORK — Wrist fusion is an irreversible procedure resulting in total loss of radiocarpal movement, but for patients with advanced Kienböck's disease, it is the treatment of choice, Anant Tambe, M.B., said at the annual meeting of the American Society for Surgery of the Hand.

Kienböck's disease is an avascular necrosis of the lunate bone; its etiology is unknown. In its advanced stages 3 and 4, the condition is characterized by progressive carpal collapse, arthritis, and significant disability. Patients with this condition typically undergo either wrist fusion or one of several types of limited carpal fusion, but there is no published evidence showing that any procedure is optimal, said Dr. Tambe, who conducted the study at the Wrightington, Wigan, and Leigh NHS Trust, England.

All patients with Kienböck's disease in the United Kingdom are referred to Wrightington Hospital in Wigan and are entered into a registry, which currently consists of 223 patients, he said.

From this cohort, 18 were identified as having stage 3 or 4 disease and were retrospectively analyzed for outcome following surgery. Of these 18 patients, 6 had undergone wrist fusion and 12 had had limited carpal fusion.

The patients' average age was 39.6 years, and males predominated. The average follow-up was 61.8 months in the wrist fusion group and 66.8 months in the limited carpal fusion group.

Pain was rated on a visual analog scale. In the wrist fusion group, pain scores fell from a preoperative average of 8 to 3.3 following surgery, whereas in the carpal fusion group it decreased from a preoperative average of 8.9 to 7.2, Dr. Tambe said. The between-group difference was statistically significant.

On other measures, including the disability of arm, shoulder, and hand (DASH) score and the Short Form (SF)-12, which rates overall health status and grip strength, the limited carpal group fared slightly better. The differences were not statistically significant, however. Patient satisfaction was slightly higher in the wrist fusion group.

An important finding was that 4 of the 12 patients in the carpal fusion group had been advised to undergo wrist fusion. "At this time, three have undergone repeat surgery and one is awaiting surgery," he commented.

An additional finding in the study was a predictable progressive pattern of arthritis, first with involvement of the midcarpal joints, then the radiolunate joint, then radioscapoid involvement, and finally global arthritis, he said. ■

Hyaluronan Injections Match Steroids for Thumb Arthritis

BY NANCY WALSH
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NEW YORK — Injections of high molecular weight hyaluronan were as effective as corticosteroids in alleviating pain associated with arthritis of the trapeziometacarpal joint, Shalom Stahl, M.D., reported at the annual meeting of the American Society for Surgery of the Hand.

Trapeziometacarpal joint arthritis is a disabling condition that presents with pain at the base of the thumb, causing impairment of hand function. Early disease is usually treated conservatively with splints, rest, and nonsteroidal anti-inflammatory drugs.

Occasionally, intraarticular injections of corticosteroids also are given, but this treatment has unpredictable efficacy and the potential for adverse events, such as infection and subcutaneous fat degeneration, that can cause additional disability, Dr. Stahl said.

High molecular weight hyaluronan (Orthovisc) is indicated for the relief of pain in knee osteoarthritis.

It is intended to restore the viscoelastic properties of the joint lining in patients who are in the early stages of osteoarthritis, said Dr. Stahl of the hand surgery unit, Rambam Medical Center, Haifa, Israel.

A total of 52 patients with grade 2

trapeziometacarpal joint arthritis were prospectively randomized to injections of 40 mg methylprednisolone acetate or 15 mg hyaluronate.

Patients were evaluated for pain severity, pinch and grip strength, and function before injection and 1, 3, and 6 months later.

Both groups experienced similar degrees of pain reduction. In the corticosteroid group, pain evaluated on a visual analog scale fell from a mean of 4.5 to 2.8; in the hyaluronate group, it decreased from 4.2 to 2.3.

Grip strength improved significantly throughout the 6-month follow-up period in the corticosteroid group but only at the 6-month point in the hyaluronate group.

Pinch strength, considered a proxy for functional improvement, improved at 6 months in the hyaluronate group but not in the corticosteroid group.

"Additionally, a significant improvement in the three-point pinch, lateral pinch, and physical performance test has been observed in the Orthovisc group starting at 3 months' follow-up," Dr. Stahl said.

"We believe that sodium hyaluronate actually works on the basic process of the degenerative arthritic changes, whereas the corticosteroid addresses only the inflammatory component," Dr. Stahl said. ■

Pyrocarbon Implant Promising for Carpometacarpal Arthritis of Thumb

BY SHARON WORCESTER
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FAJARDO, P.R. — A new strategy for performing hemiarthroplasty for arthritis in the thumb carpometacarpal joint, appears to reduce pain and improve function.

The procedure involves using a pyrolytic carbon metacarpophalangeal (MCP) metacarpal head implant, Robert Beckenbaugh, M.D., said at the annual meeting of the American Association for Hand Surgery.

Previous implants of the thumb's carpometacarpal joint have involved using a round zirconium prosthesis that provided relief of pain and discomfort and ranked high in patient satisfaction. However, significant subsidence of the zirconium balls occurred.

A German surgeon, attempting to address this adverse event and create a stronger joint, developed the new procedure using the pyrocarbon implant, he explained.

Initial experience with 12 patients suggests that the procedure

leads to early functional improvements during the postoperative course, and excellent mobility and pain relief up to 7 months later, said Dr. Beckenbaugh of the Mayo Clinic, Rochester, Minn.

The implant is inserted into the base of the thumb metacarpal, and the acetabulum for the implant is prepared in the distal end of the trapezium. The patient remains in a cast for 6 weeks.

Impressed by the 1-year results reported from Germany, Dr. Beckenbaugh traveled there to learn the technique. Early results suggest such outcomes are occurring in his patients as well.

In his case series of 12 patients with rheumatoid arthritis, psoriatic arthritis, or osteoarthritis, after at least 3 months follow-up, half reported 100% pain relief postoperatively, and the other

half reported only occasional pain. There has been no change in grip strength, but the improvements in pain have been significant.

One patient, a 45-year-old with severe rheumatoid arthritis and no use of her thumb, reported good function and no pain at 7 months follow-up. She had good stability of the carpometacarpal joint.

Another patient who had 2 years of unsuccessful conservative treatment for osteoarthritis, underwent the procedure and experienced significant pain reduction and now has no difficulty opposing her thumb to her index or small fingers.

This preliminary experience with the pyrocarbon implant suggests that it is of benefit for patients with carpometacarpal arthritis, Dr. Beckenbaugh concluded. ■

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Use of Cement Advised in Arthroplasty of PIP Joint

BY SHARON WORCESTER
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FAJARDO, P.R. — Patients undergoing arthroplasty of the proximal interphalangeal joint should opt for the cement, Bruce Johnstone, M.D., advised at the annual meeting of the American Association for Hand Surgery.

In 2000, the Avanta surface replacement proximal interphalangeal (PIP) joint was modified to incorporate a titanium stemmed distal component that allows for press fit cementless fixation, Dr. Johnstone noted.

But ever since the product's modification, observational evidence suggests that loosening and subsiding occurs more frequently when cement is not used with this second-generation device, Dr. Johnstone explained.

In a study involving 49 joint replacements using the cement-optional device, 1 of 27 cemented implants with at least 1 year of follow-up loosened and subsided, and 18 of

the 27 have had no loosening or subsiding in up to 6 years of follow-up.

Of 22 cementless implants, 10 have loosened or subsided in up to 3 years of follow-up, reported Dr. Johnstone of Royal Children's Hospital, Melbourne, Australia.

When loosening and subsiding has occurred, it is often with angulation that leads to the stems of the device penetrating the cortical bone.

At first the subsidence is typically asymptomatic. However, as it progresses, pain and stiffness tend to develop, he said.

As a precaution, it is best to use methylmethacrylate bone cement to fix the stems of the cement-optional Avanta PIP surface replacement arthroplasty, he recommended at the meeting.

Those with cemented implants experienced a significant decrease in their pain, with scores on the visual analog scale improving by 5 points or more, Dr. Johnstone said. ■