

New surgical option for wrist arthritis

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Breaking a fall, such as a tumble on the sidewalk, with your hands and wrists is everyone's natural reflex. But, if you fall hard enough, you'll often fracture your radius bone, or even one of the smaller wrist bones and wrist ligaments. Left untreated, these injuries could lead to disabling wrist arthritis.

For patients who develop wrist arthritis, a new surgical option known as OCRPRC (OsteoChondral Resurfacing in Proximal Row Carpectomy) is available at NewYork-Presbyterian Hospital/Columbia University Medical Center, where it is offered by one of the orthopedic surgeons who originally developed and described the technique -- Dr. Peter Tang. His research shows that the procedure reduces pain and improves hand function.

"I often see patients who had a wrist injury in the past who either did not seek medical attention or whose original injury was not diagnosed. As with most things in medicine, the earlier a diagnosis is made, the better the outcome. So if you continue to have pain after a month, you should make an appointment to see a hand surgeon for an evaluation," says Dr. Tang, who is an orthopedic hand surgeon at NewYork-Presbyterian Hospital/Columbia University Medical Center and assistant professor of orthopedic surgery at Columbia University College of Physicians and Surgeons.

Because the biomechanics of the wrist is both delicate and complex, an alteration in the normal anatomy can lead to arthritis. Once disabling arthritis develops, surgery cannot simply fix the injured structure, but

rather must remove the arthritis and improve wrist function. The two most common operations for wrist arthritis are a partial fusion of the small wrist bones (intercarpal fusion) and excision of the first row of carpal bones (proximal row carpectomy, or PRC). There are various reasons to choose one operation over the other, but PRC has a quicker recovery, may be better for older patients, gives equal grip strength to intercarpal fusion, and usually results in more wrist motion.

Once the three carpal bones are removed during the PRC procedure, the capitate bone becomes the point where the wrist articulates with the arm; as such, it is important that the arthritis has not progressed to the capitate bone.

For these patients whose arthritis has progressed, Dr. Tang has adapted a cartilage-grafting technique that is used effectively in sports medicine treatments for cartilage disorders in the knee, ankle and elbow. The results are promising, according to his study in the *Journal of Hand Surgery*, with improvement in grip strength and decrease in pain levels.

"The goal of this new procedure is to give the best possible outcome by improving the cartilage status of the capitate bone. Another plus is that we do not have to take the graft from another part of the body. Even though we take out the three carpal bones for arthritis, there is usually one area of the bones where we can find undamaged cartilage for grafting," says Dr. Tang.

The study followed eight patients who underwent osteochondral resurfacing over 18 months. Preoperatively, seven patients described their pain as moderate to severe, while postoperatively, seven patients described their pain as mild to no pain, and one patient described the pain as moderate. Preoperative grip strength increased from 62 percent of their healthy side to postoperatively, 71 percent. Preoperative Mayo wrist score improved from a score of 51, which rates as "poor," to a

postoperative score of 68, which rates as "fair."

Source: Columbia University Medical Center

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