Robotics Continues To Grow In Orthopaedic Surgery

PRNewswire -- Orthopaedic surgeon Kevin R. Stone, M.D., has performed San Francisco's first outpatient, robot-assisted knee replacement surgery. The procedure replaced the patient's patellofemoral joint. While robotic joint surgery has been growing nationally, the development of techniques to enable joint replacement to be performed as an outpatient procedure has the potential to revolutionize orthopaedics and the economics of healthcare. The Makoplasty joint replacement procedure allowed the patient to walk out of the surgery center 1-1/2 hours after surgery and begin physical therapy the next day.

Robots have dramatically improved the accuracy of joint replacement procedures by merging CT computerized measurement data with surgical cutting burrs. In the past, cutting guides were not as accurate and, therefore, incisions were much larger. The case performed this week focused on a particularly difficult joint replacement of the patellofemoral joint of the kneecap and opposing femur.

Due to the complex shapes of these bones, traditional replacement surgery of this area has not been as effective as typically seen in usual knee joint replacements. During the procedure, the diseased portion of the knee is resurfaced, sparing the patient's healthy bone and surrounding tissue. An implant is then secured in the joint to allow the knee to move smoothly again. The new robotic technique, called Makoplasty, holds promise for superior outcomes given the new level of accuracy.

The best quote of the day at surgery occurred when Dr Stone asked the patient if he wanted to meet his co-surgeon, Dr. Velyvis, who is a pioneer in Makoplasty procedures. The patient replied, "No, I just want to meet the robot!"

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