New Study Compares After-Hours And Daytime Surgery Success Rates

Rate of minor complications increases in surgeries performed after hours

ROSEMONT, Ill., Sept. 1 /PRNewswire-USNewswire/ -- Patients who have after-hour orthopaedic surgeries risk a slightly higher rate of necessary follow-up surgeries, according to a study published in the September 2009 issue of The Journal of Bone and Joint Surgery (JBJS). The data also suggests that patients whose surgeries took place during the day have the same healing, recovery time, and major complication rates as patients who have surgery after hours.

"Although everyone wants to be treated immediately, it may be in a patient's best interest to wait until morning. The reality is that the on-call night surgical team may not be well rested as it is likely they had just finished a normal day shift," said study lead author William M. Ricci MD,

Associate Professor of Orthopaedic Surgery and Chief of the Orthopaedic Trauma Service in the Department of Orthopaedic Surgery at the Washington University School of Medicine.

The prospective study tracked the results of 203 patients with either a femoral (thighbone) fracture or tibial shaft (shin bone) fracture, who were each treated with intramedullary nail fixation (a supportive rod used to stabilize the bone.) The patients were primarily divided into two groups:

-- a daytime group, defined as those who had surgery between 6 a.m. and 4 p.m.; and

-- an after-hours group of those who had surgery between 4 p.m. and 6 a.m.

All patients were given the same treatments, based on the bone injured.

The data suggested similar healing time and intra-operative radiation exposure for the two groups. However, the data also showed some notable differences in outcomes between after-hours and daytime surgeries:

-- The after-hours group had more unplanned follow-up operations than the daytime group;

-- Removal of painful hardware was more frequent in an after-hours group (27 than the corresponding daytime group (3 %); and

-- Operative times were slightly shorter in the after-hours groups.

"The results of the study suggest that the system is working fairly well and it is not always best to rush a patient to the OR in the middle of the night. Naturally, when the medical condition is emergent and time is a critical factor, immediate surgery should proceed regardless of time of day," said Dr. Ricci.

The study results suggest that daytime operative time for orthopaedic trauma surgery has the potential to reduce minor complication rates with intramedullary nail fixation.

"We, in the healthcare industry don't have unlimited resources. Many hospitals in the U.S. do have a dedicated night team of orthopaedic surgeons who otherwise are without daytime responsibilities. There are surgical teams on-call for those instances when treatment must be immediate. For non-emergent fracture care, sufficient daytime resources should be made available to avoid unnecessary night-time surgery," said Dr. Ricci.

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