

Multicenter study supports safety of overlapping orthopaedic surgery

November 26 2018

For patients undergoing orthopaedic surgery, the use of "overlapping" procedures - where the attending surgeon is simultaneously involved in two different surgeries in different operating rooms—does not lead to an increased risk of complications, reports a study in the November 21, 2018 issue of *The Journal of Bone & Joint Surgery*.

According to this analysis of thousands of cases from five US medical centers by Christopher J. Dy, MD, MPH, of Washington University School of Medicine, St. Louis, and colleagues, [complication](#) rates are at least as low in overlapping versus non-overlapping orthopaedic surgeries. They write: "Our results suggest that overlapping inpatient orthopaedic [surgery](#) does not introduce additional perioperative risk for the complications that we evaluated."

Data Support Safety of Overlapping Procedures; Patient Informed Consent Is Essential

Overlapping surgery is commonly used to maximize operating room efficiency. In these procedures, the primary surgeon is involved in different surgeries in different operating rooms at the same time. Although this practice is not new, overlapping surgery has become controversial in the wake of recent high-profile media reports.

Most previous studies of overlapping surgery have found no increase in complications. However, these studies have had significant limitations—particularly in terms of small numbers of [patients](#) and low

rates of overlapping surgeries.

Dr. Dy and colleagues analyzed 14,135 [orthopaedic surgery](#) procedures performed at five university medical centers during 2015. In this multicenter series, 40 percent of procedures were overlapping surgeries, which were defined in this study as "two incisions open simultaneously for one surgeon." The researchers compared complication rates for patients undergoing overlapping versus non-overlapping procedures.

The main analysis showed that overlapping surgery was "noninferior" to non-overlapping surgery in terms of 30-day complication rate. That meant that the group undergoing overlapping surgeries did not have an increase in complications.

In addition to being noninferior, overlapping surgery was associated with a lower complication rate (one percent) compared to non-overlapping surgery (two percent). The [analysis](#) was adjusted for other factors affecting the risk of complications, including patient medical conditions, the type of procedure, and the institution where the surgery was performed.

Overlapping surgery was also associated with significant reductions in length of hospital stay and risk of hospital readmission. The researchers emphasize that their findings don't mean that overlapping procedures reduce surgical risks. Rather, they write, "these findings likely reflect characteristics influencing surgical outcomes that we cannot reliably measure...such as individual procedure complexity and surgeon experience."

A survey published last year in [The Journal of Bone and Joint Surgery](#) reported that patients and families "aren't comfortable" with the idea of overlapping surgeries. While the new findings support the safety of overlapping orthopaedic procedures, both studies emphasize the

importance of patient understanding and informed consent. Dr. Dy and colleagues conclude: "It is incumbent on surgeons who perform overlapping surgery to disclose this [practice](#) to their patients and to collect patient-reported outcomes to ensure continuing patient satisfaction and to demonstrate benefit to society."

More information: Christopher J. Dy et al. Safety of Overlapping Inpatient Orthopaedic Surgery, *The Journal of Bone and Joint Surgery* (2018). [DOI: 10.2106/JBJS.17.01625](https://doi.org/10.2106/JBJS.17.01625)

Provided by Wolters Kluwer Health

Citation: Multicenter study supports safety of overlapping orthopaedic surgery (2018, November 26) retrieved 11 April 2023 from <https://medicalxpress.com/news/2018-11-multicenter-safety-overlapping-orthopaedic-surgery.html>

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