

# Gallbladder removal linked to better outcomes when performed soon after hospital admission

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Delaying a needed gallbladder removal operation (known as a cholecystectomy) for an inflamed gallbladder (called acute cholecystitis) for more than 72 hours after hospital admission may not be the safest approach for patients. Surgeons report a 72-hour delay increases the odds of complications and 30-day readmissions, lengthens hospital stays, and may make patients likelier to need open operations, compared with patients who have the operation performed within 24 hours of admission, according to research findings presented at the American College of Surgeons Clinical Congress 2019.

People who have gallstones may develop serious inflammation and infection of the gallbladder and need urgent gallbladder removal. In the United States, cholecystectomy is one of the most commonly performed abdominal surgical procedures.

"People who have a bout of acute cholecystitis are at very high risk for another attack and the infection could be life threatening," said study coauthor Stanley Z. Trooskin, MD, FACS, chief, surgical services at Robert Wood Johnson University Hospital, New Brunswick, New Jersey. "In our study, about 20 percent of the patients who underwent a cholecystectomy waited more than 72 hours to have the operation, so it's common to delay gallbladder removal."

As such, the study's lead author Michael T. Scott, MD, a surgical

resident at Robert Wood Johnson University Hospital, investigated the question, if a patient with gallbladder disease gets admitted Friday, can they afford to wait until Monday to have a cholecystectomy?

Dr. Scott and colleagues used the 2012-2016 ACS National Surgical Quality Improvement Program (ACS NSQIP) database to identify patients who underwent a laparoscopic (minimally invasive) or had open abdominal surgery for acute cholecystitis. ACS NSQIP is a nationally validated, risk-adjusted, outcomes-based program to measure and improve the quality of surgical care.

For the analysis, researchers divided nearly 50,000 cases into three groups. The reference group consisted of 12,968 patients who had their gallbladders removed within 24 hours of [admission](#).

The second group included 26,758 patients who were sent to the operating room between 24 and 72 hours after admission. And the third group consisted of 9,594 patients whose operation was delayed 72 hours or more after admission.

The researchers adjusted for confounding factors such as age, body mass index and diabetes and then evaluated odds of complications and 30-day readmissions. They also looked at [hospital](#) length of stay.

Patients who underwent the operation within 24 hours of admission went home the day after the operation. However, when the procedure was delayed 72 hours or more, the total hospital length of stay increased to about five days. "Our study shows that potentially 20 percent of patients would have a shorter length of stay if they had undergone an earlier operation," Dr. Trooskin said.

Furthermore, delaying the operation three days or more after admission increased the chances of having an open operation versus a laparoscopic

(minimally invasive) procedure by 28 percent.

Another important finding was that the risk of complications increased dramatically when the operation was delayed. Compared with having the operation soon after admission, delaying the operation 72 hours or more increased the odds of sepsis by approximately 50 percent, of venous thrombus embolism by over 80 percent, and of surgical site infection by 20 percent.

In addition, 30-day readmission was greater in people who waited 72 hours or longer for their operation. Odds of returning to the hospital within a month rose by 25 percent for those patients.

This data suggests that you shouldn't wait until Monday to have the operation, and that you should have your operation as soon as the diagnosis is made, Dr. Trooskin said. "Not only is it better for patient safety, but in this age of cost consciousness, it implies that we ought to have available the technical expertise to do the operations on the weekend and get the patient in the operating room and out of the hospital as soon as possible. In addition to a better outcome for the patient, you are also saving money for the health care delivery system."

The next step is to identify the real reasons for the delay in performing the operation. Is it a patient barrier, a facility/equipment barrier, or not having a skilled team available that can perform the operation more quickly? Future research will answer this question, Dr. Trooskin said. He also explained that this research has some limitations that are typical of a large database study. "You can't really say it's cause and effect."

Provided by American College of Surgeons

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