

# Outcome of Delayed Cholecystectomy after Percutaneous Cholecystostomy for Acute Cholecystitis

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**A** certain treatment is well-established as better. Recommendations are not followed. Investigational energy is spent on the less recommended treatment. Results confirm it's not a good treatment.

This description, unappealing as it is, refers, admittedly in a somewhat cruel way, to the work of Sakran and colleagues, published in this issue of the *Israel Medical Association Journal (IMAJ)* [1].

The question of the optimal timing for surgery on an inflamed gallbladder is the subject of numerous studies, and the search for "timing of cholecystectomy for acute cholecystitis" yield 62,000 hits on a Google search. Yet, the answer is written on the wall by quite a few high-quality studies, and the recommendations favoring early cholecystectomy are expressed in consensus statements and guidelines [2]. When early surgery is not performed, most patients will respond to antibiotic and supportive treatment, and a certain percentage of them will require drainage of the inflamed and obstructed gallbladder to control the septic process. Delayed surgery, after several weeks, is the rule in these cases.

The reason to defer surgery is commonly the estimated high risk in performing immediate surgery due to other medical conditions or a significant delay in presentation. However, it seems that the choice of delayed surgery is the rule rather the exception in many surgical departments in Israel. This policy is based on the limited availability of operating rooms, and probably of skilled surgeons after hours. The

result is a disturbing prevalence of delayed cholecystectomy [3], and the widespread use of invasive drainage by a cholecystostomy tube, as a temporizing measure, ranging from 25% [4] to 36% in Sakran's group.

This "easy life" for the surgeons, deferring the need to deal with the acute condition in a stressed and busy system, does not come without a price for the patient, the surgeon, and the system. These complications include a longer hospital stay, repeat episodes of acute biliary disease and re-admissions, and more difficult eventual surgery, which is manifested mainly by a higher rate of conversion from laparoscopic to open surgery [5].

In Sakran's study, increased conversion rate (and its associated higher surgical site infection rate) was found to be the only significant difference between cases in which a cholecystostomy tube was used and in those without a tube, but this is not supported by other studies in which biliary complications were more prevalent in the cholecystostomy group [4].

The lack of increased complication rate in Sakran's study may signify a timely conversion, proper surgical technique, and avoidance of risky situations of unclear anatomy. However, a 26% conversion rate, twice that of non-drained cases, is significantly higher than commonly encountered in the literature.

Sakran and colleagues [1] do not reveal the complete picture. The indications for insertion of a cholecystostomy tube were not defined, and with the availability of invasive radiology service, over-use is likely to occur, as was evident by the higher percentage of drained patients compared to other studies. The patients in Sakran's study were neither very old (mean age was 55 years of age for non-drained patients and 63 years old for drained) nor very sick (80% were classified as American Society of Anesthesiologists status 1 or 2). They also did not have a control group of patients who underwent

surgery early, although we can assume, based on the widely available literature, that the overall outcome, including conversion rate, would have been better in such a group.

## CONCLUSIONS

The lesson from this study should not be limited to the numbers and statistics, which are not really surprising. It should raise a red flag to the policy makers at all levels: surgery departments, hospitals, and the Israeli Ministry of Health. Our treatment of patients with acute cholecystitis is wrong, probably more expensive, maybe more dangerous, and certainly outside the standards as defined by studies and experts and practiced in Western countries.

Resources should be allocated to enable early surgery for this condition, and delayed cholecystectomy, with the occasional need for tube cholecystostomy, should be kept to minimum and based on real contraindications for early surgical intervention.

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## References

1. Sakran N, Kopelman D, Dar R, et al. Outcome of delayed cholecystectomy after percutaneous cholecystostomy for acute cholecystitis. *IMAJ* 2018; 18: 627-31.
2. Ansaloni L, Pisano M, Coccolini F, et al. 2016 WSES guidelines on acute calculous cholecystitis. *World J Emerg Surg* 2016; 11: 25.
3. Yuval JB, Mizrahi I, Mazeh H, et al. Delayed laparoscopic cholecystectomy for acute calculous cholecystitis: is it time for a change? *World J Surg* 2017; 41 (7): 1762-68.
4. Mizrahi I, Mazeh H, Yuval JB, et al. Perioperative outcomes of delayed laparoscopic cholecystectomy for acute calculous cholecystitis with and without percutaneous cholecystostomy. *Surgery* 2015; 158 (3): 728-35.
5. Bickel A, Hoffman RS, Loberant N, et al. Timing of percutaneous cholecystostomy affects conversion rate of delayed laparoscopic cholecystectomy for severe acute cholecystitis. *Surg Endosc* 2016; 30 (3): 1028-33.