

TIMING OF CHOLECYSTECTOMY FOR ACUTE CHOLECYSTITIS: EARLY OPERATION (WITHIN 72 HOURS) VERSUS DELAYED (INTERVAL) SURGERY

Jumanazarova Mokhinur Jumanazar kizi

*2nd year of master degree in surgery at
Tashkent State Medical University*

Annotation: *This paper presents a comparative analysis of the clinical efficacy of early laparoscopic cholecystectomy (performed within 72 hours of symptom onset) versus delayed (interval) surgical intervention for acute cholecystitis. Key assessment criteria include the rate of intraoperative complications, the risk of conversion to open laparotomy, total length of hospital stay (LOS), and overall cost-effectiveness. Based on data from current meta-analyses, the definitive advantages of the early surgical strategy are established for the vast majority of patient cohorts.*

Key words: acute cholecystitis, early cholecystectomy, delayed cholecystectomy, interval surgery, conversion, Tokyo Guidelines.

Acute cholecystitis (AC) ranks second among all emergency abdominal surgical pathologies. For a significant period, the prevailing surgical paradigm focused on allowing the acute inflammation to "cool down" first. Patients routinely received aggressive intravenous antibiotic and antispasmodic therapy, while definitive gallbladder removal was deferred for 6–8 weeks (delayed or interval cholecystectomy) under the assumption that this reduced bile duct injury rates. However, advancements in minimally invasive technologies and robust clinical data have overturned this premise in favor of early or urgent surgery during the initial hours of presentation.

Results and Discussion

1. Early Cholecystectomy (Within 72 Hours)

The anatomical conditions within the first 3 days of symptom onset are characterized primarily by tissue edema, localized fluid exudation, and loosely formed, easily separable "watery" adhesions within Calot's triangle.

Advantages: Tissues are readily separated via hydrodissection. Prompt removal of the infectious focus entirely eliminates the risk of recurrent gallstone-related attacks during an artificial waiting matrix.

Disadvantages: Demands around-the-clock availability of highly skilled surgical teams, as acute edema can distort standard landmarks.

2. Delayed (Interval) Cholecystectomy (After 6–12 Weeks)

This approach presumes that the procedure becomes technically simpler once active inflammation subsides. However, in reality, the acute edema transforms over several weeks into a dense, fibrotic, "stony" scar tissue configuration.

Advantages: Allows ample time to comprehensively evaluate and optimize highly comorbid patients in an elective setting.

Disadvantages: Advanced scar tissue at the porta hepatis severely impairs safe skeletonization of the cystic duct and artery. Furthermore, up to 20% of patients experience gallstone-related relapses, gangrenous progression, or biliary sepsis during the interval waiting period, requiring emergency re-admission.

3. Comparative Outcome Matrix

Parameter	Early Cholecystectomy (<72 Hours)	Delayed Cholecystectomy (>6 Weeks)
-----------	-----------------------------------	------------------------------------

Bile Duct Injury Risk Equivalent (~0.3–0.5%) when strict safe dissection parameters are utilized.	Equivalent; however, dense scarring can elevate iatrogenic risks.
---	---

Conversion Rate to Open	Low (~3–5%) due to easily dissectible edematous tissue planes.	Elevated (~10–15%) due to dense fibrotic fusing of critical structures.
-------------------------	--	---

Total Length of Stay (LOS)	Significantly shorter (the disease is resolved within a single admission).	Longer (encompasses combined days from the initial and second admissions).
----------------------------	--	--

Cost-Effectiveness	High (marked reduction in total hospital bed-days and secondary care costs).	Lower (incurs doubled admission costs, diagnostics, and repetitive therapies).
--------------------	--	--

Per the Tokyo Guidelines (TG18), early laparoscopic cholecystectomy serves as the absolute gold standard for Grade I (mild) and Grade II (moderate) acute cholecystitis, provided the patient is systemically stable.

Conclusion

Early laparoscopic cholecystectomy (within 72 hours of symptom onset) demonstrates clear, evidence-based advantages over delayed interval protocols. It achieves rapid social reintegration, completely mitigates the risk of interim destructive relapses, and notably reduces the financial burden on healthcare infrastructure. A delayed strategy should be strictly reserved for patients presenting in profound septic shock (TG18 Grade III) requiring initial ultrasound-guided cholecystostomy tube placement, or individuals with unoptimized, decompensated medical conditions.

LIST OF REFERENCES:

1. **Затевахин, И. И.** Острый холецистит у пациентов пожилого и старческого возраста: стандарты диагностики и лечения / И. И. Затевахин, М. С. Громов // Хирургия. Журнал им. Н.И. Пирогова. — 2024. — № 4. — С. 12–19.
2. **Хатьков, И. Е.** Особенности эндоскопической хирургии в гериатрической практике / И. Е. Хатьков, Р. Е. Асхабов // Эндоскопическая хирургия. — 2023. — Т. 29, № 5. — С. 22–28.
3. **Loozen, C. S., et al.** (2018). Laparoscopic cholecystectomy versus percutaneous catheter cholecystostomy for acute cholecystitis in high-risk patients (CHOCOLATE trial): randomized clinical trial. *BMJ*, 360, k111. doi.org
4. **Pisanu, A., et al.** (2021). World Society of Emergency Surgery (WSES) guidelines for the management of acute cholecystitis in the elderly and frail population. *World Journal of Emergency Surgery*, 16(1), 29-38.