



Protocol-Based Day-Case Laparoscopic Cholecystectomy Compared with Historical Inpatient Practice

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OBJECTIVES

Primary: Compare hospital length of stay and patient safety between protocol-based DCLC and the historical inpatient pathway.

STUDY DESIGN & DATA

Single-center comparative cohort
Prospective DCLC: n=30
Retrospective historical inpatient: n=24
Total: 54 patients
Same eligibility criteria applied to historical cohort
Data from electronic medical records
30-day follow-up from hospital/clinic/ED records

PATIENT SELECTION

Inclusion: age <70; elective LC; ASA I-III with controlled comorbidities; family support and adult caregiver for 24 h; ability to understand instructions; no complicated biliary disease.

Exclusion: ASA IV/unstable; acute/emergency; CBD stone; ERCP/additional procedure; conversion to open surgery.

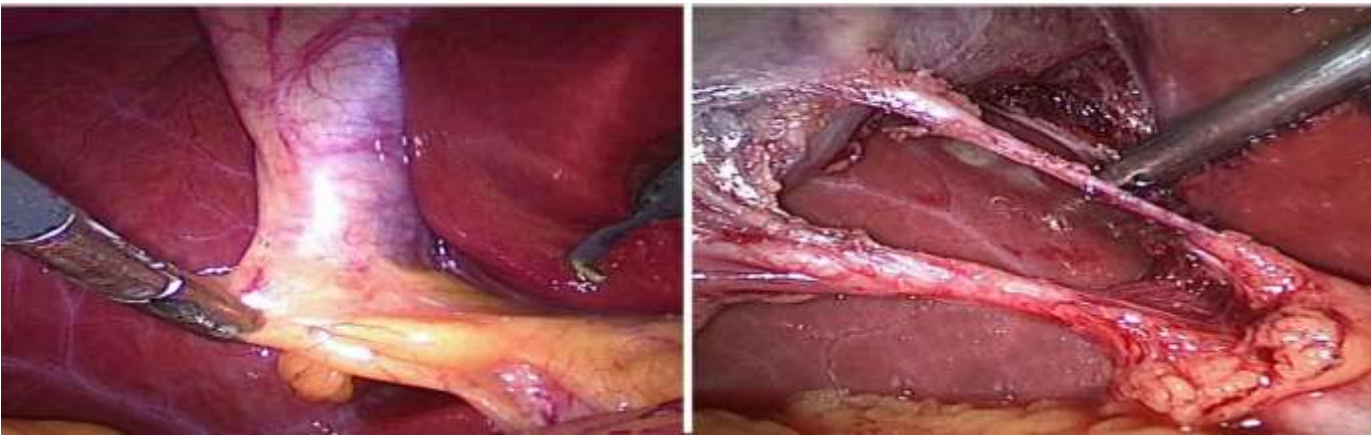
SAME-DAY DISCHARGE PROTOCOL

All institutional criteria had to be fulfilled:
Stable vital signs ≥ 2 h; recovered from anesthesia
Pain $\leq 4/10$ with oral analgesics
No persistent nausea/vomiting; tolerating oral fluids
Mobilizing without significant dizziness; passed urine
No active bleeding or complication requiring admission
Patient/attendant understood instructions and warning signs
Adult caregiver for 24 h; access to emergency care

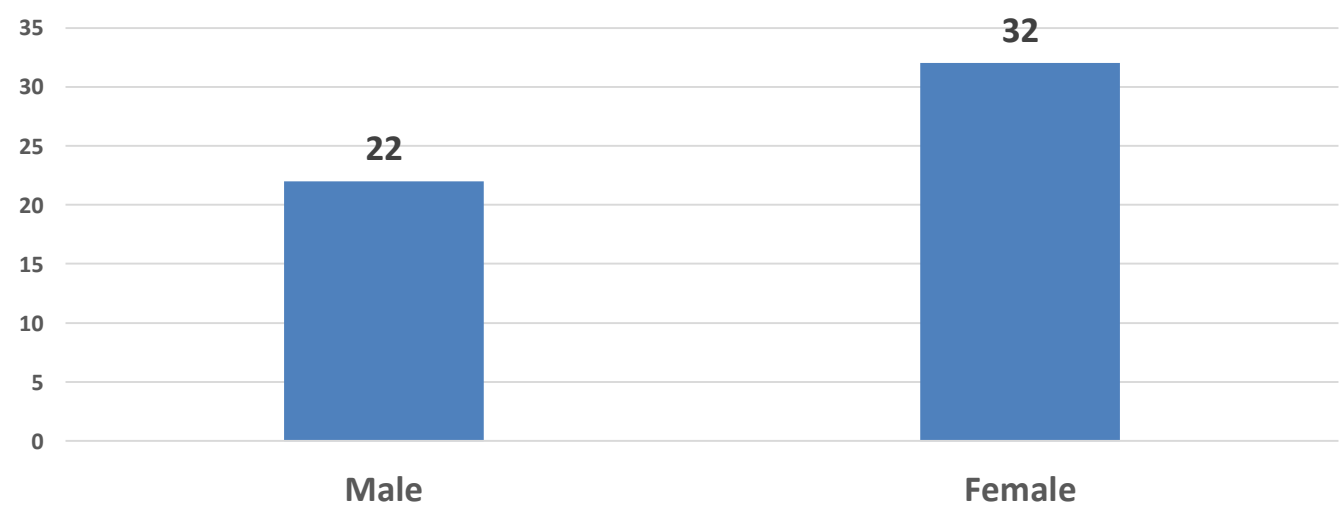
Failure to meet any criterion $\rightarrow$ overnight admission.

STANDARDIZED PATHWAY

Selection $\rightarrow$ perioperative care $\rightarrow$ monitored recovery $\rightarrow$ discharge criteria



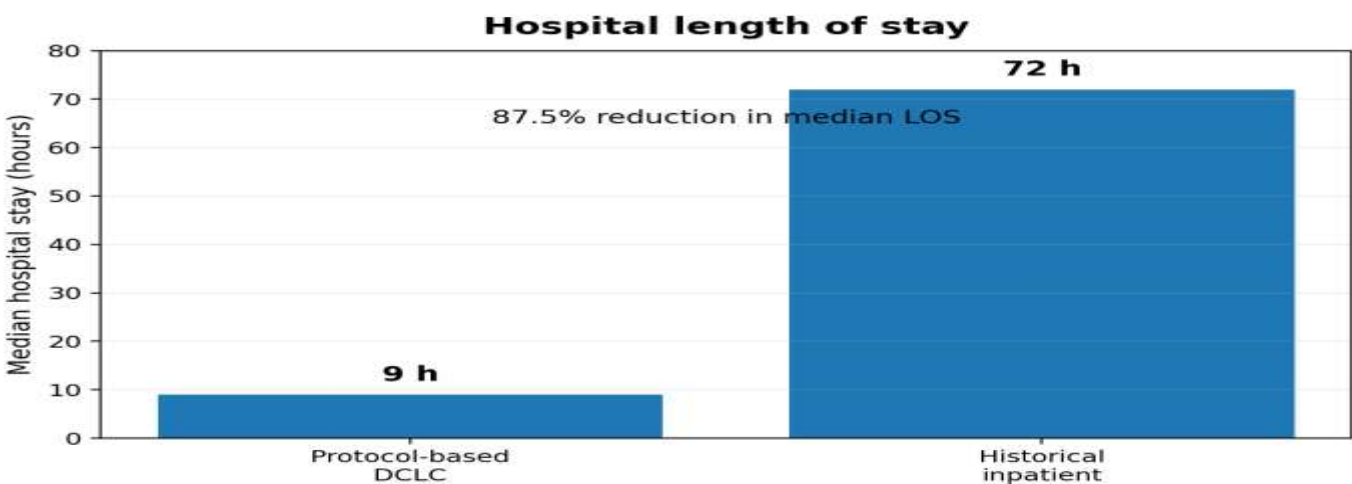
Demographics



PRIMARY RESULT

MEDIAN LENGTH OF STAY

9.0 h vs 72.0 h
87.5% reduction in median hospital stay



PERIOPERATIVE & SAFETY OUTCOMES

Operative time: median 85 vs 102 min ($p=0.261$)
Blood loss: median 5 vs 20 mL ($p=0.003$)
Complications: 6.7% vs 4.2% ($p=1.000$)
DCLC: 1 surgical-site infection + 1 port-site hernia
Historical inpatient: 1 bile leak

RESOURCE UTILIZATION

Institutional inpatient bed cost: PKR 18,000/day.
Mean LOS: 70.5 h $\rightarrow$ 8.7 h.
Estimated hospitalization-related bed-cost saving:
PKR 46,350 per DCLC patient
 $\approx$ PKR 1.39 million for 30 DCLC patients

DISCUSSION

The marked LOS reduction is consistent with recent evidence supporting structured day-case LC pathways.^{1-3,7,8} Appropriate patient selection, social support, education and clear discharge criteria are central to successful same-day discharge.^{2,3,8} The locally adapted pathway incorporated these principles.⁴

LIMITATIONS & CONCLUSION

Limitations: historical comparator; potential selection bias; small single-center sample; and temporal differences in surgical, anesthetic, postoperative and documentation practices.

Conclusion: DCLC was feasible and reduced median LOS by 87.5%, without an observed increase in complications or 30-day ED visits, readmissions or reoperations. Larger comparative studies are needed.

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