

BILIARY HYPOKINESIS AND HYPERKINESIS: SINGLE INSTITUTION COMPARATIVE OUTCOMES FOLLOWING CHOLECYSTECTOMY

A M Leon, MD^{1,2}; S A Hassan, MD^{1,2}; J R Salameh, MD, FACS, FASMB^{1,2}

1. Virginia Hospital Center, Department of General Surgery

2. Medstar Georgetown University Hospital, Department of General Surgery

Introduction: Biliary dyskinesia includes functional gallbladder disorders marked by biliary pain and abnormal ejection fraction (EF) on Hepatobiliary Iminodiacetic Acid (HIDA) with Cholecystokinin (CCK), in the absence of structural pathology. Two forms exist: hypokinesia (EF <40%) and hyperkinesia (EF >80%). Cholecystectomy is established for hypokinesia treatment but less studied for hyperkinesia. This study compares postoperative outcomes between the two cohorts.

Methods & Analysis: A retrospective review of patients undergoing cholecystectomy for biliary dyskinesia was conducted at a single center (2020–2025). Inclusion criteria included biliary pain, no gallstones/sludge, and abnormal EF (<40% or >80%). Patient demographics and symptom profiles were collected via medical records. Primary outcomes —symptom improvement, quality of life, and satisfaction— were assessed via standardized surveys. Chi-square and Fisher’s exact tests determined significance.

Table 1. Frequency of preoperative symptoms in patients with hypokinesia versus hyperkinesia

	RUQ Pain	Epigastric Pain	Nausea	Vomiting	Bloating
Hypokinesia	100%	100%	77.8%	44.4%	66.7%
Hyperkinesia	100%	100%	75%	44.6%	66.7%

Table 2. Overall post-operative patient reported outcomes, satisfaction with surgical outcome and quality of life.

	Overall change in symptoms post-op		
	Fully resolved	Significantly Improved	Minimally Improved
Hypokinesia	20%	60%	20%
Hyperkinesia	8.3%	91.6%	0%
	Would undergo surgery again		
	Definitely	Probably	No
Hypokinesia	80%	10%	10%
Hyperkinesia	91.6%	8.3%	0%
	Quality of life improvement		
	Greatly	Somewhat	No Change
Hypokinesia	70%	30%	0%
Hyperkinesia	66.7%	33.3%	0%

Results: Thirty-six patients met criteria: 17 with hypokinesia, 19 with hyperkinesia. Follow-up surveys were completed by 10 hypokinetic and 12 hyperkinetic patients. Post-operatively, the majority of patients in both the hypo- and hyperkinesia groups reported complete resolution of pain, 70% and 58.3% respectively. Nausea completely resolved in 57% of hypokinesia patients and in 66.7% of hyperkinesia patients. Emesis completely resolved in 50% of hypokinesia patients but in 83% of hyperkinesia patients. Post-operative patient reported overall symptom improvement, satisfaction with surgical outcome and quality of life changes are shown in Table 2. No significant differences in outcomes were found between groups for post-operative symptoms, satisfaction with surgical outcomes nor quality of life changes ($p = 0.30–0.61$).

Conclusion: Cholecystectomy yields high rates of symptom relief and satisfaction in both biliary hypokinesia and hyperkinesia. While complete resolution was more common in hypokinesia, hyperkinetic patients also experienced meaningful benefits. Findings support cholecystectomy for both and underscore the need for larger studies to inform practice guidelines.