



Factors predicting readmission within 30 days of acute pancreatitis attack: A prospective study



Introduction

Little is known of the risk of repeat episodes of acute pancreatitis (AP) within 30 days [1]. Our primary objective was to determine the 30-day readmission rate for AP in the community with the secondary aim to identify re-admission risk factors.

Methods

Patients admitted from 2015 to 2017 were enrolled and were prospectively reviewed for 30 days after discharge. AP was confirmed by revised Atlanta Classification. A sub-analysis was performed in biliary AP patients to identify if inpatient cholecystectomy (CCY) and intraoperative cholangiogram (IOC) was performed.

Table 1
Patient demographics.

	All Patients (N = 205)	Readmitted Patients (N = 36)
Sex		
Male	110 (53.7%)	22 (61.11%)
Female	95 (46.3%)	14 (38.89%)
Race		
Caucasian	125 (60.96%)	31 (86.11%)
African American	72 (35.1%)	4 (11.11%)
Other	8 (3.94%)	1 (2.78%)
Age		
>50	125 (61%)	22 (61.11%)
<50	80 (39%)	14 (38.89%)
BMI		
<18.5	4 (1.95%)	2 (5.56%)
18.5–24.9	50 (24.4%)	9 (25%)
25–29.9	56 (27.3%)	8 (22.22%)
30–35	53 (25.9%)	12 (33.33%)
>35	40 (19.5%)	5 (13.89%)
Etiology of AP		
Biliary	71 (34.6%)	15 (41.67%)
Alcohol	62 (30.2%)	7 (19.4%)
Idiopathic	51 (24.9%)	6 (16.7%)
Hypertriglyceride	8 (3.9%)	
Pancreatic Mass	4 (1.95%)	1 (2.8%)
Post-ERCP	2 (0.98%)	
Dorsal pancreatic Agenesis	2 (0.98%)	2 (5.6%)
Medications	1 (0.49%)	
Hypercalcemia	1 (0.49%)	
Papillary Stricture	1 (0.49%)	1 (2.8%)
Non-Pancreatic Admission	1 (0.49%)	4 (11.1%)
Groove Pancreas	1 (0.49%)	

**2 patients with unknown BMI.

Results

We enrolled 205 patients with 36 (17.6%) readmitted within 30 days (Table 1). Caucasians (86.1%), males (61.1%), age > 50 (61.1%), BMI > 25 (55.6%), and local pancreatic complications (30.56%) were at highest risk. Most readmissions were due to biliary AP (15/36 patients; 41.67%) (Table 2). 34/71 biliary AP patients (47.9%) did not have CCY. IOC was performed in only 20.7% of CCY cases. 18/36 (50%) of readmitted patients had local pancreatic complications; these were present on index admission in 11 (30.56%) patients. 88.3% of patients without CCY had adequate insurance coverage.

Discussion

Our readmission rate was found to be 17.6% consistent with previous data. Caucasians, males, BMI >25, local pancreatic complications, and age >50 were at risk for re-admissions for AP within 30 days. Risks increase with failure to undergo CCY and IOC. Guidelines suggest this should be done within 3 days as repeat attacks of AP increase mortality [2,3]. Furthermore, patients who require ERCP can be identified as retained biliary stones are seen in up to 12% of cases [4–6].bib6

Table 2
Patients with biliary AP (N = 71).

	CCY (N = 29; 40.8%)	No CCY (N = 34; 47.9%)
Etiology		
Cholecystitis	6 (8.5%)	
Choledocholithiasis	17 (23.9%)	
Both	5 (7.04%)	
Neither	43 (60.6%)	
	6 (20.7%)	
IOC		
ASA		
1	0	3 (8.82%)
2	8 (27.59%)	3 (8.82%)
3	19 (65.52%)	16 (47.06%)
4	2 (6.89%)	4 (11.76%)
Unknown		8 (23.53%)
Insurance		
Medicaid	2 (6.89%)	7 (20.6%)
Medicare	19 (65.52%)	16 (47.1%)
Private	7 (24.14%)	7 (20.6%)
None	1 (3.45%)	4 (11.8%)

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