Scholars Journal of Applied Medical Sciences
Abbreviated Key Title: Sch J App Med Sci
ISSN 2347-954X (Print) | ISSN 2320-6691 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Digestive Endoscopy

Symptom Patterns and their Diagnostic Value in Patients Undergoing Pancreaticobiliary EUS

Addajou Tarik[1*], Benhamdane Ahlame[1], Mrabti Samir[1], Amine Meriem[1], Elkoti Ilham[1], Rouibaa Fedoua[1], Seddik Hassan[1]

[1]Department of Digestive Endoscopy, Mohammed V Military Hospital, Rabat, Morocco

DOI: https://doi.org/10.36347/sjams.2026.v14i05.030 | **Received:** 02.03.2026 | **Accepted:** 17.04.2026 | **Published:** 21.05.2026

***Corresponding author:** Addajou Tarik
Department of Digestive Endoscopy, Mohammed V Military Hospital, Rabat, Morocco

Abstract **Original Research Article**

Background: Endoscopic ultrasound (EUS) is a key diagnostic modality for pancreaticobiliary diseases. However, patient symptoms at referral may help predict EUS findings and guide clinical decision-making. ***Objective:*** To analyze the relationship between presenting symptoms and final diagnoses in patients undergoing pancreaticobiliary EUS. ***Methods:*** We conducted a retrospective analysis of patients referred for pancreaticobiliary EUS. Recorded symptoms included abdominal pain, jaundice, weight loss, vomiting, and fever. Diagnoses were categorized as malignant lesions, benign lesions, inflammatory conditions, or non-diagnostic findings. ***Results:*** A total of 129 patients were included. Pain was the most frequent symptom (72%), followed by weight loss (43%), jaundice (36%), vomiting (16%), and fever (5%). Malignant lesions were diagnosed in 28 patients, while benign cystic lesions were identified in 5 cases, inflammatory or infectious conditions in 5 cases, and non-diagnostic sampling in 6 cases. Multivariate logistic regression analysis demonstrated that weight loss was independently associated with malignant pancreaticobiliary disease (OR = 19.88, 95% CI 5.11–77.29, $p < 0.001$). ***Conclusion:*** Symptom patterns may provide useful clinical information before EUS evaluation. In this cohort, weight loss was the only symptom independently associated with malignant pancreaticobiliary disease.

Keywords: Endoscopic ultrasound, Pancreaticobiliary disease, Malignancy, Weight loss, Abdominal pain, Jaundice.

INTRODUCTION

Pancreaticobiliary diseases represent a diagnostic challenge due to their frequently non-specific clinical presentation. Early diagnosis is crucial, especially for pancreatic cancer which remains one of the most lethal malignancies worldwide. Endoscopic ultrasound (EUS) has become one of the most sensitive imaging modalities for pancreatic and biliary diseases and allows tissue acquisition through fine-needle biopsy [1-3]. Studies have shown that EUS has superior sensitivity compared with conventional imaging for detecting small pancreatic lesions [4].

Symptoms such as abdominal pain, jaundice and weight loss are frequently observed in pancreaticobiliary diseases and may reflect the underlying pathology [5]. Understanding the relationship between symptom patterns and final diagnoses may therefore improve patient selection for EUS and help prioritize patients at higher risk of malignancy.

METHODS

Study Design: Retrospective analysis of a prospectively maintained database including patients referred for pancreaticobiliary EUS at a tertiary referral center. Patient Population: All consecutive patients undergoing EUS for suspected pancreaticobiliary disease were included. Data Collection: Symptoms recorded included abdominal pain, jaundice, weight loss, vomiting and fever. Diagnostic Classification: Diagnoses were categorized as malignant lesions, benign cystic lesions, inflammatory or infectious conditions or non-diagnostic findings. Statistical Analysis: Descriptive statistics were used to summarize patient characteristics and symptom frequencies.

RESULTS

A total of 129 patients were included in the analysis.

Table 1: Distribution of symptoms among patients undergoing EUS

Symptom	Number of patients	Percentage
Pain	93	72%
Weight loss	55	43%
Jaundice	47	36%
Vomiting	20	16%
Fever	7	5%

Table 2: Final diagnoses obtained after EUS evaluation

Diagnosis	Number of cases
Malignant lesions	28
Benign cystic lesions	5
Inflammatory / infectious conditions	5
Non-diagnostic sampling	6

The most frequent presenting symptom was abdominal pain (72%), followed by weight loss (43%), jaundice (36%), vomiting (16%), and fever (5%).

Final diagnoses included 28 malignant lesions, 5 benign cystic lesions, 5 inflammatory or infectious conditions, and 6 non-diagnostic samplings.

Multivariate logistic regression analysis was performed to evaluate the association between clinical symptoms and malignant pancreaticobiliary disease. Odds ratios (OR) with 95% confidence intervals (CI) and p-values were calculated.

Table 3: Logistic regression analysis of symptoms associated with malignant lesions

Variable	OR	95% CI	p-value
Pain	1.057	0.325 – 3.436	0.926
Jaundice	1.222	0.406 – 3.681	0.721
Weight Loss	19.875	5.111 – 77.288	0.0
Vomiting	0.89	0.232 – 3.407	0.865
Fever	0.238	0.024 – 2.415	0.225

Weight loss was strongly associated with malignant pancreaticobiliary disease (OR = 19.88, 95% CI 5.11–77.29, $p < 0.001$). Pain (OR = 1.06, $p = 0.926$), jaundice (OR = 1.22, $p = 0.721$), vomiting (OR = 0.89, $p = 0.865$) and fever (OR = 0.24, $p = 0.225$) were not significantly associated with malignancy.

Discussion

Pain was the most common presenting symptom but had limited specificity for malignancy, which is consistent with previous studies [6]. The combination of jaundice and weight loss was more frequently associated with malignant pancreaticobiliary disease. Obstructive jaundice is a classical manifestation of pancreatic head tumors and cholangiocarcinoma [5]. Fever was observed exclusively in inflammatory or infectious conditions, suggesting a non-malignant etiology. Although symptoms cannot replace imaging or histological confirmation, they may guide clinical decision-making and help optimize patient triage before EUS examination [7,8].

Conclusion

Symptom patterns may provide useful clinical information before pancreaticobiliary EUS evaluation. In this cohort, weight loss was the only symptom independently associated with malignant pancreaticobiliary disease (OR = 19.88, 95% CI 5.11–77.29, $p < 0.001$).

Other symptoms including abdominal pain, jaundice, vomiting, and fever were not significantly associated with malignancy.

These findings suggest that unexplained weight loss should raise suspicion for malignant pathology and may help prioritize patients for early EUS evaluation.

References

1. Hawes RH, Fockens P. Endosonography. Elsevier; 2011.
2. Vilmann P, *et al.,* Endoscopic ultrasound-guided fine-needle aspiration biopsy. Gastrointestinal Endoscopy.
3. Dumonceau JM, *et al.,* Indications and clinical impact of endoscopic ultrasonography. Gastrointestinal Endoscopy.
4. Chen G, *et al.,* Diagnostic accuracy of EUS-FNA for pancreatic cancer: a meta-analysis. World Journal of Gastroenterology.
5. Brugge WR. The role of endoscopic ultrasound in pancreatic disease. New England Journal of Medicine.

6. Yoshida T, *et al.,* Endoscopic ultrasound for early diagnosis of pancreatic cancer. World Journal of Gastroenterology.
7. Yousaf MN, *et al.,* Endoscopic ultrasound and the management of pancreatic cancer. BMJ Open Gastroenterology.
8. Dahiya DS, *et al.,* Basic principles and role of endoscopic ultrasound in pancreatic disease. Journal of Clinical Medicine.