

A MACHINE-LEARNING BASED DECISION TOOL SELECTING PATIENTS WITH IDIOPATHIC ACUTE PANCREATITIS FOR ENDOSONOGRAPHY TO EXCLUDE A BILIARY ETIOLOGY

Ujjwal M. Mahajan

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Poster

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A multicenter retrospective study developed and validated a machine learning prediction model using routine admission laboratory parameters to identify biliary microlithiasis or sludge as the cause of idiopathic acute pancreatitis and guide patient selection for endosonography.

KEY POINTS

- The machine learning model was trained on 218 patients with acute pancreatitis using 28 categorized variables recorded at admission and achieved an accuracy of 0.84 (95% CI 0.791-0.9185) with positive predictive value 0.84 and negative predictive value 0.80.
- External validation in two independent cohorts totaling 117 patients confirmed model robustness with accuracy of 0.76 (95% CI 0.673-0.8347), positive predictive value 0.76, and negative predictive value 0.78.
- Biliary microlithiasis or sludge is detected in up to 75% of patients with idiopathic acute pancreatitis, which occurs in 25% of all acute pancreatitis cases.
- The authors conclude the model can predict biliary sludge and microlithiasis as the cause of acute pancreatitis using routinely recorded laboratory work and select patients for endoscopic ultrasound.
- This tool may be relevant for gastroenterologists and pancreatologists managing patients with acute pancreatitis of unclear etiology.

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