

Diagnosis of metastases to gastrointestinal tract using fine needle aspiration

Bain LaFollette¹, Tieying Hou²

¹Indiana University School of Medicine, ²Indiana University School of Medicine, Department of Pathology and Laboratory Medicine

Context and Hypothesis: Metastases to the gastrointestinal (GI) tract are less prevalent than primary tumors, with the small intestine as an exception. Limited literature exists on using fine needle aspiration (FNA) for diagnosing these tumors. We hypothesize that FNA will have a greater sensitivity for disease detection compared to surgical biopsy.

Design: We accessed the pathology database to retrospectively review cytomorphology and radiologic features of 41 metastatic tumors of GI tract diagnosed by FNA. Results were compiled and analyzed in Excel.

Results: The cohort included metastases involving stomach (19; 39%), rectum (11; 27%), small intestine (10; 24%) and esophagus (3; 7%) The median age was 66.5 years (range: 26 to 86 years) with female predominance (F/M: 1.92). The median interval between primary diagnosis and metastases was 20 months (range: 0 to 174 months). Metastases were the initial clinical manifestations in 7 patients. Twenty-six patients presented with mass-forming lesions, 13 showed diffuse wall thickening, 1 patient showed wall narrowing, and 1 noted no comment on endoscopic ultrasound. Concurrent core biopsies were obtained in 22 cases (54%), with 14 (64%) yielding falsely negatives due to sampling error. obtained in 20 cases (54%), with 12 (60%) yielding falsely negatives due to sampling error. The most common primary sites were breast (8; 19%), ovary (6; 14%), bladder (5; 12%), pancreatobiliary tract (3; 7%), and colon (3; 7%). Thirty-two patients (84%) had other distant organ metastases. Seventy-eight percent of patients (32) died of disease, with a median follow-up of 11 months (range: 1 to 73 months). Among these, nineteen died within a year of GI metastases.

Conclusions and Potential Impact: FNA reliably diagnoses secondary GI tract tumors, in contrast to mucosal biopsies, which often yield false negatives. FNA serves as a more reliable way of diagnosing GI metastases tract while also being less invasive.