Letter: Acute Pancreatitis – A Rare Complication of Common Tropical Infections!

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Dear Editor,

We read with interest a case report of dengue fever complicated with acute pancreatitis in a recent volume of your esteemed journal.[1] It is important to note that acute pancreatitis is a rare complication in several tropical infections. Around 14% of patients with dengue hemorrhagic fever and abdominal pain have acute pancreatitis.[1–3]

Apart from dengue fever, malaria and scrub typhus too may rarely be complicated by pancreatitis.[4,5] Prompt treatment of infection with appropriate drugs leads to good outcome in such cases.[4,5] Acute pancreatitis occurs in 3.7 to 5.65% of patients with acute viral hepatitis. It is usually mild and recovers with conservative management.[6,7] The mechanism of pancreatitis in such patients is multifactorial —secondary to development of edema of the ampulla of Vater, direct inflammation and destruction of pancreatic acinar cell by the virus, and release and circulation of lysosomal enzymes from the inflamed liver with the activation of trypsinogen to trypsin.[5] Few cases of acute pancreatitis caused by *Salmonella* infection have been reported. Presentations may range from mild abnormalities to pancreatic abscesses requiring surgical treatment. The mechanism of development of pancreatitis includes hematogenous or lymphatic spreading or by direct penetration of the pancreas via migration to the pancreatic duct from the duodenum and the biliary tree. Hydration and treatment with effective antibiotics can be life-saving.[8,9]

With this background, we conducted a retrospective study to determine the frequency and outcomes of acute pancreatitis secondary to tropical infections at our center. This was a retrospective analysis from a prospectively maintained database of patients with acute pancreatitis admitted at our hospital between May 2019 and May 2023. We excluded patients younger than 18 years, those with history of alcohol intake and gallstones, and those with incomplete data. Diagnosis of acute pancreatitis was confirmed by typical clinical features (pain epigastrium, distention, vomiting) with elevated serum amylase and lipase levels more than three times the upper limit of normal. Other causes of pancreatitis like alcohol, gallstones, hypertriglyceridemia, hypercalcemia, and drugs were ruled out by history and blood investigations. The temporal relationship between acute febrile illness and pancreatitis was established. The etiology of infection was confirmed by clinical presentation and appropriate blood investigations.

Out of 152 cases with acute pancreatitis admitted during the study period, 9 (5.9%) were due to tropical infections. These included dengue fever (2), acute hepatitis A infection (2), enteric fever (1), acute hepatitis E infection (1), falciparum malaria (1), and scrub typhus (1). The median age of the patients was 26 years (range: 16–43 years) and all were males. The clinical features included pain abdomen (9, 100%), vomiting (9, 100%), jaundice (8, 89%), abdominal distention (6, 67%), and altered sensorium (3, 33%). The onset of pain after the start of fever ranged from 1 to 5 days (median: 2 days). Ultrasound of the abdomen showed diffusely hypoechoic pancreas (9, 100%), free fluid in the peritoneal cavity (3, 33%), and pleural effusion (3, 33%). Computed tomography of the abdomen was done in four patients, which showed changes of acute edematous pancreatitis. The median duration of hospitalization was 8 days (range: 4–18 days). One patient with dengue fever required ventilation. All the patients recovered and favorable outcome was noted in 100% of cases.

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To conclude, tropical infections contribute to 5.9% of cases with acute pancreatitis. Pancreatitis is generally mild in such cases and resolves with prompt initiation of treatment of infection. Usually, the outcome is favorable.

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Not applicable.

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All authors contributed equally to the article.

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Conflict of Interest
None declared.

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