



Severe metabolic acidosis as initial manifestation of a neuroendocrine pancreatic tumor

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Background:

Neuroendocrine tumors (NETs) are a heterogeneous group of tumors that usually arise in the gastrointestinal tract, lungs, adrenal glands or thyroid gland, with the pancreas being the most common site. NETs of the pancreas are usually nonfunctional, present with nonspecific symptoms, and thus can be difficult to detect.

Case presentation:

A 58-year-old male patient, with a history of type 2 diabetes mellitus, presented in the emergency department with fatigue and widespread pain. One week prior, the patient began experiencing stomach cramps, nausea and abdominal pain that radiates to the back. During this time, he lost his appetite. Upon arrival, laboratory tests showed an acid-base disturbance, with a blood pH of 6.8 and lactate levels above 15 mmol/l. Creatinine levels were 954 $\mu\text{mol/l}$ and urea was 38.9 mmol/l. Because the patient was being treated with metformin therapy, he was initially admitted to the intensive care unit for possible metformin lactic acidosis and acute renal failure. Suspecting mesenteric ischemia, a CT scan was performed revealing an expansive mass, 4.5x3.5 cm in size, located at the pancreatic tail and infiltrating the splenic hilus and the gastric wall. Initial treatment included renal dialysis, intravenous bicarbonate, norepinephrine and antibiotics with gradual improvement. The patient was transferred to the Chronic Liver Disease Center for further evaluation of the abdominal mass. Multiple biopsies were obtained during the esophagogastroduodenoscopy and histopathological findings showed a G3 neuroendocrine tumor (NET). He underwent surgery followed by adjuvant chemotherapy with etoposide and cisplatin, and has no evidence of recurrence after 18 months.

Conclusion:

We report the first case, to our knowledge, of metastatic pancreatic NET presenting with severe lactic acidosis. This report emphasises the importance of a thorough diagnostic workup and intensive treatment, enabling a long-term positive outcome for the patient.

Keywords:

lactic acidosis; metformin; neuroendocrine tumors