A 58-year-old woman, with a history of diabetes and hypertension, presented with vomiting and severe epigastric pain for 3 days. Physical examination showed a blood pressure of 110/70 mmHg, pulse rate of 100 beats per minute, respiratory rate of 20 breaths and oxygen saturation of 96% on room air. Abdominal examination showed epigastric tenderness with bruising in the subcutaneous fatty tissue around the periumbilical region, consistent with Cullen’s sign. Laboratory investigations showed elevated serum lipase level (1780 U/L, reference range <90U/L) and hence the diagnosis of acute pancreatitis was confirmed. Abdominal ultrasonography revealed cholelithiasis without evidence of choledocholithiasis. Computed tomography was performed and showed a necrotizing pancreatitis with several peripancreatic fluid collections (Balthazar grade E). The patient’s condition rapidly deteriorated with multi-organ failure requiring her transfer to the intensive care unit. She died 2 days after hospitalization.

Cullen’s sign was first described in 1918 by Thomas S. Cullen, a Canadian gynecologist, in association with a ruptured ectopic pregnancy. It is a rarely seen clinical sign that consists of a periumbilical ecchymosis, and suggests severe intra-abdominal pathology. It results from the tracking of haemorrhagic fluid from the retroperitoneum along the gastrohepatic, falciform and round ligament to the subcutaneous periumbilical tissues. Although not specific, it has been historically associated with acute necrotizing pancreatitis and high mortality. Early identification of Cullen’s sign is imperative and should lead physicians to promptly start intensive supportive care.

References: