

# A patient with a large periumbilical bruise and acute abdominal pain

A.L. Duijnhouwer<sup>1\*</sup>, M. Leuken<sup>2</sup>, C.P.C. de Jager<sup>1</sup>

Departments of <sup>1</sup>Intensive Care and <sup>2</sup>Radiology, Jeroen Bosch Hospital, Location Grootzieken Gasthuis, 's-Hertogenbosch, the Netherlands, \*corresponding author: tel.: +31 (0)73-699 20 00, fax: +31 (0)73-699 26 82, e-mail: t.duijnhouwer@gmail.com

## CASE REPORT

A 61-year-old male was admitted to the intensive care unit with acute respiratory insufficiency, hypotension and increasing abdominal pain. There was no known medical history and the patient was reported to drink about 10 units of alcohol daily. Physical examination showed an obese man in respiratory distress. He was afebrile with a blood pressure of 90/50 mmHg, pulse rate 100 beats/min regular and a respiratory rate of 30 breaths/min. His peripheral saturation was 90% breathing 12 litres oxygen through a non-rebreathing mask. Auscultation of the thorax and cardiac examination were unremarkable. Abdominal examination showed a periumbilical small bruise, which increased in size in the following days (*figure 1*). The abdomen was distended and tender on palpation without guarding.

## WHAT IS YOUR DIAGNOSIS?

See page 406 for the answer to this photo quiz.

Figure 1. Periumbilical bruise



ANSWER TO PHOTO QUIZ (ON PAGE 405)

A PATIENT WITH A LARGE PERIUMBILICAL BRUISE AND ACUTE ABDOMINAL PAIN

**DIAGNOSIS**

Acute haemorrhagic pancreatitis was diagnosed based upon the reported alcohol consumption, clinical examination and the laboratory findings (total bilirubin 32  $\mu$ mol/l, aspartate aminotransferase 136 U/l, alanine aminotransferase 85 U/l, and amylase 191U/l). The abdominal computerised tomography (CT) (*figure 2*) confirmed the diagnosis of pancreatitis and showed prominent peripancreatic inflammatory changes and extensive necrosis of more than 50% of the pancreatic parenchyma (CT severity index: score 9).<sup>1</sup>

The skin discolouration in the periumbilical region is called Cullen's sign and reflects periumbilical grid cyanosis due to diffusion of retroperitoneal blood into the falciform ligament and, subsequently, to the subcutaneous umbilical tissues via the connective tissue covering the round ligament complex.<sup>2</sup> Cullen first described the bluish periumbilical discoloration related to ruptured ectopic pregnancy.<sup>3</sup> Cullen's sign is a well-known symptom of haemorrhagic pancreatitis although seldom observed. It is described in less than 3% of patients with an acute pancreatitis with an estimated mortality of 37%.<sup>4</sup> Four weeks after admission the patient died due to an uncontrollable intra-abdominal bleeding.

**Figure 2.** CT at pancreas level



**REFERENCES**

1. Balthazar EJ, Robinson DL, Megibow AJ, Ranson JH. Acute pancreatitis: value of CT in establishing prognosis. *Radiology* 1990;174:331-6.
2. Sugimoto M, Takada T, Yasuda H, et al. MPR-hCT imaging of the pancreatic fluid pathway to Grey-Turner's and Cullen's sign in acute pancreatitis. *Hepatogastroenterology* 2005;52:1613-6.
3. Cullen TS. Embryology, anatomy, and diseases of the umbilicus together with diseases of the urachus. Philadelphia, London: Saunders, 1916.
4. Dickson AP, Imrie CW. The incidence and prognosis of body wall ecchymosis in acute pancreatitis. *Surg Gynecol Obstet* 1984;159:343-7.