Diagnostic Images

Acute pancreatitis

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The patient

A male age 48 years lifted heavy weights, followed by pain in the abdomen. The next day he woke up with severe pain in the abdomen which continued for a further 4 days until admission.

On examination the temperature was 38.8°C and the heart rate 114 beats/min. There was a palpable upper abdominal mass anterior to the liver and in the epigastrium. All blood tests including plasma amylase were normal.

The differential diagnosis was ? gallbladder mass or possibly a rolled omentum.

Ultrasound appearances suggested acute pancreatitis and an enlarged liver with fatty infiltration. Oesophago-gastroduodenoscopy showed haemorrhagic gastritis on the posterior wall.

Seven days after admission amylase from aspiration of the pseudocyst was 987 IU/l.

Figure 1 Sonogram showing stomach (st) after being filled with water and fluid collection (ps-cy) behind the gastric antrum representing a pseudo-cyst adjacent to the head of the pancreas.

Figure 2 Fluid collection (Ps-cy) posterior to the liver and anterior to the right kidney (RK) in Morrison's pouch.

Figure 3 CT scan showing small fluid collection (arrows) below the left hemidiaphragm and also immediately posterior to the stomach.

Figure 4 In a lower section the fluid collection can be seen posterior to the stomach and immediately in front of the pararenal fascia (arrows).

Figure 5 The anterior aspect of the pancreas (P) is covered by a pseudo-cyst lying immediately behind the stomach (St) and duodenum (D) and medial to the liver (L).

Figure 6 In a lower section the fluid collection anterior to the right kidney (rk) can be seen as well as below the gall bladder fossa and jejunum (J). On the left there is thickening of the anterior pararenal fascia (Gerota)(1) posterior pararenal fascia (Zuckerandl)(2) and the latero-conal fascia (3).

Comment

Acute pancreatitis is usually associated with an unequivocally raised serum amylase that returns to normal within a few days as the attack subsides. The presenting features are then abdominal pain and not infrequently an abdominal mass. Sonography is highly suggestive and computed tomography virtually pathognomonic. Thickening of the pararenal fascia occurs in many conditions involving the peritoneum, retroperitoneum and kidneys, but when associated with fluid collections in or around the pancreas or evidence of peripancreatic inflammation, unequivocally denotes pancreatitis. Aspiration of fluid will yield raised amylase levels even though the serum amylase has become normal. Similarly pancreatic pleural effusions have a markedly raised amylase content.

References

KREEL, L. (1981). Radiography with ultrasonography and computed tomography. In *The Pancreas*, Keynes, W.M.

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