

Role Of Magnetic Resonance Imaging In The Diagnosis of Pancreatic Lesions

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To My Grand Mother, Mother, Fianceé, Family and Friends

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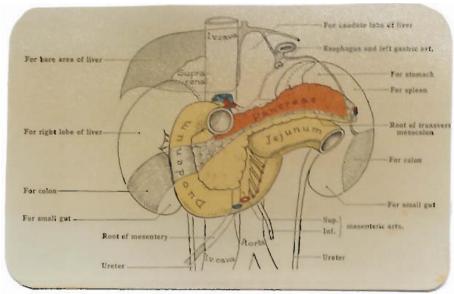
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INTRODUCTION and AIM OF THE WORK

INTRODUCTION & AIM OF THE WORK

- The commonest pancreatic lesions could be categorized into pancreatic cysts, pancreatitis and pancreatic carcinomas.
- Although with MRI there are no specific feature that permit the constant differentiation between normal and diseased pancreatic tissue or between tumour and inflammation, but in general, MRI was most useful in evaluation of the pancreas after surgery and in staging of pancreatic creinoma (Tscholakoff D., et al., 1987).
- The aim of the work is to evaluate the role of MRI in diagnosis of pancreatic lesions.

RADIOLOICAL ANATOMY





Pancreatic Gross Anatomy (Quoted From Anderson, 1983).

Figure (1)

GROSS ANATOMY OF THE PANCREAS (Fig. 1)

The pancreas is a soft, lobulated, greyish-pink gland consisting of head, neck, body, and tail.

In shape, the gland resembles the upper end of a thick walking - stick or hook, lying side ways with the handle or hook, on the right side and turned downwards; retortshaped, tapering from a big hand to a narrow tail, the whole being over 15 cm (6 in) long.

The gland lies behind the peritoneum of the posterior abdominal wall with the hea d and t al in the paravertebral gutter, while the ne rward over the inferior vena cay first lumber vertebra. The s anterior surface just ab he gland lies in the supracolic compartment (in the lesser sac, forming part of the stomach bed, but a narrow same along its inferior border lies in the infracolic compartment. (Mc Minn, 1993).

The Head:

The head is the broadest part of the pancreas, moulded to the C-shaped concavity of the duodenum which it completely fills. It lies over the inferior vena cava and the right and left renal veins at the level of L_2 vertebra.

The anterior surface of the head lies in both supracolic and infracolic compartments; some of this surface is bare for the leaves of the greater omentum and the transverse mesocolon.

The posterior surface of the head is deeply indented, and some times tunnelled by the terminal part of the bile duct. The lower part of the posterior surface is prolonged, wedge - shaped to the left, behind the superior mesenteric vein and aftery, in front of the aorta; this is the uncinate process of the head. (Mc Minn, 1993).

The Neck:

The neck is best defined as the narrow hand of pancreatic tissue that lies in front of the superior mesenteric and portal veins, continuous to the right with the head and to the left with the bedy.

At the lower margin of the neck the superior mesenteric vein is embraced between the neck and the uncinate process of the head, and the splenic vein runs into the left side of the vertical superior mesenteric-portal channel.

The tansverse mesocolon is attached towards the lower border of the neck, which lies in the stomach bed of the lesser sac (omental bura). (Mc Minn, 1993).

The Body:

The body of the pancreas passes from the neck to the left, sloping gently upwards across the left renal vein and aorta, left crus of diaphragm, left psoas muscle and lower pole of the left suprarenal gland, to the hilum of the left kidney.

The body of the pancreas is almost triangular in section, having three surfaces: anterior, posterior, and inferior separated by three borders, superior, anterior, and inferior.

The anterior surface is concaved director upwards and forwards, covered with per toneum and repursed from the stomach by the oriental bursa.

The posterior surface is device of pentoneum, intimately related to the splenic vein, the left crus of the diaphragm, the left suprarenal gland, the left kidney and the left renal vein. The inferior mesenteric vein joins the splenic vein behind the body of the pancreas in front of the left renal vein where it lies over the left psoas muscle.

The inferior surface is covered by the posterior inferior

layer of the transverse mesocolon, related to the duoden - jejunal flexure, coils of the jejunum and the left colic flexure.

The superior border is blunt and flat to the right, sharp and narrow to the left near the tail. It crosses the norta at the origin of the coeliac trunk; the tortuous splenic artery passes to the left along the superior border of the body and tail.

The anterior border lies between the anterior and the inferior surfaces. Along this border the two layers of the transverse mesocolon divarge from each other, one passing upwards over the anterior surface, the other passes backwards over the inferior surface.

The inferior border has between the posterior and the inferior surfaces. The specior meservoic wassely emerge under its right extremty. (Warvick & William, 1972).

The Tail:

The tail of the pancreas pass. In ward from the anterior surface of the left kidney at the level of the hilum. Accompanied by the splenic artery, vein and lymphatics, it lies within the two layers of the lieno-renal ligament and thus touches the hilum of the spleen. (Mc Minn, 1993).