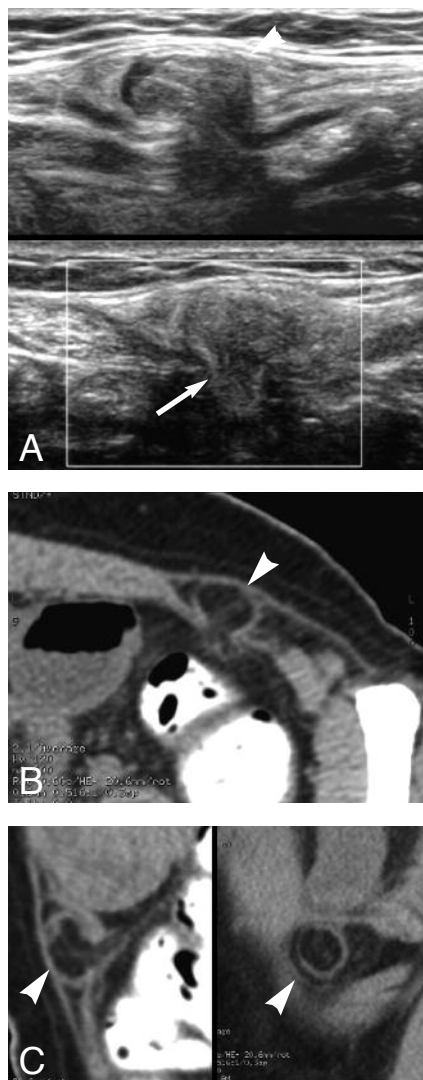


## IMAGES IN CLINICAL RADIOLOGY



### *Epiploic appendagitis within a Spigelian hernia*

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A 49-year-old female presented to the emergency room with a one week history of continuous pain in the left iliac fossa. Local tenderness was present and a painful olive-shaped mass was clearly palpable in this area. Ultrasound revealed an 18 x 10 mm painful hyperechoic avascular mass (Fig. A, sagittal and axial view) which was trespassing the abdominal wall through a 7-millimetre orifice. It was prolonged by a small intra abdominal pedicle ending on the sigmoid colon (white arrow).

The herniating mass was surrounded by a small amount of fluid and interstitial fat and this complex remained covered by the aponeurosis of the great oblique muscle (white arrowhead). The orifice was situated exactly along the spigelian line constituted by the external border of the left rectus muscle and the internal border of the lateral abdominal muscles.

An epiploic appendage incarceration – with secondary appendagitis – through a parietal Spiegelian hernia was diagnosed and confirmed by unenhanced MDCT (Fig. B (axial view) and C (oblique sagittal and coronal view)). The patient underwent laparoscopic repair of the hernia. The post operative period was uneventful.

#### *Comment*

Spigelian hernia (SH) classically develops under the level of the arcuate line of Douglas where a physiologic anatomic change of the posterior rectus sheath produces resulting in an area of relative “weakness” more prone to develop parietal hernias.

Under this line of Douglas, all three aponeurosis of the lateral abdominal muscles do not more equally distribute anteriorly and posteriorly around the rectus muscle to constitute a firm circumferential sheath but abruptly pass exclusively anteriorly to the muscle, thus creating a weakness of the posterior rectus sheath. This weakness is amplified by the fact that, at this level, the internal oblique and transverse muscles do not more constitute solid muscular bands but only fascias or thin musculo-aponeurotic bands separated by fascias and running in a parallel instead of perpendicular way. 95% of SH produce through these slitting defects.

Transversally this area is situated between the rectus muscle and the lateral abdominal muscles on a curvilinear vertical line called the line of Spiegel.

SH always contain a peritoneal sac, rarely exceed a diameter more than 2 or 3 cm and remain covered by the aponeurosis of the external oblique. The high percentage of complications is essentially due to the small size of their orifice – 0,5 to 2 cm – which predisposes to incarcerations and strangulations with occlusive syndrome.

Presentation and symptoms are variable and related to the nature of the incarcerating structure. Moreover SH are also clinically difficult to diagnose because a typical mass is not always palpable. The greater omentum, small bowel, sigmoid colon or caecum are the most implicated organs but cases implicating a strangulated appendice, the gallbladder, an ovary or a testis, the round ligament or the fallopian tube, the stomach, the Meckel's diverticulum, an uterine fibroma or endometrial nodules have also rarely been reported. Incarceration of an epiploic appendage (EA) – with secondary appendagitis – in a SH has only exceptionally been described with only three previous cases described in the literature and only one case with ultrasound and CT correlations.

Classically acute epiploic appendagitis (AEA) results from twisting, kinking or stretching of EA along their long axis with impairment of their vascular supply, subsequent venous thrombosis and necrosis. Patients describe a localized, strong, non-migratory, sharp pain with localised abdominal tenderness. When localised on the right it may mimic acute appendicitis, but more often it is found on the left side of the abdomen mimicking acute sigmoid diverticulitis. Ultrasound shows an oval, avascular and non-compressible hyperechoic mass with a subtle hypoechoic rim directly under the site of maximum tenderness. Although CT findings also appear very typical US has specific advantages on CT to diagnose the incompressibility of the lesion, visualise its adherence to the parietal peritoneum and establish a precise correlation between the location of the lesion and that of the maximal parietal tenderness. In the reported case ultrasound rapidly focused on the elective site of tenderness and unambiguously recognized the typical intermingled ultrasound semeiology of both epiploic appendagitis and spigelian hernia. CT confirmed the ultrasound diagnosis but finally didn't carry any complementary decisive data for the diagnosis and therapeutic decision.