

OMPHALOLITH/UMBOLITH: CT AND MR IMAGING APPEARANCES IN TWO PATIENTS

Dear Sir,

Omphalolith, also described variously as omphalith, omphalokeratolith or umbolith, is the term given to a calculus found in the umbilicus. These predominantly consist of keratin and sebum. They may be asymptomatic or may present with redness or discharge from the umbilicus. We present the radiological appearances of the omphalolith that we encountered in two patients.

In Case 1, a 33-year-old man, a software analyst, presented to the surgical outpatient department with purulent discharge from the umbilicus for 7–8 days. He initially had pain and swelling, followed by a minimal amount of pus discharge. On examination, there was periumbilical induration and tenderness. Magnetic resonance (MR) imaging, requested to rule out a patent urachal sinus, showed abnormal hyperintense signal on T2-weighted and STIR images in the subcutaneous tissues adjacent to the umbilicus. A well-defined signal void is also seen within the umbilicus (Fig. 1). Operative findings showed approximately 10 ml of pus and a 1.0 cm × 1.0 cm dark calculus within the umbilicus.

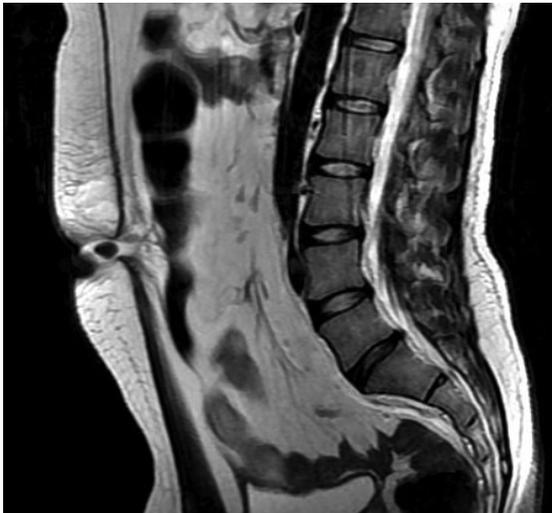


Fig. 1 Sagittal T2-W MR image shows a well-defined smooth signal void in the umbilicus. Hyperintense areas, suggestive of oedema/fluid, are also noted around the umbilicus. No intraperitoneal extension is seen.

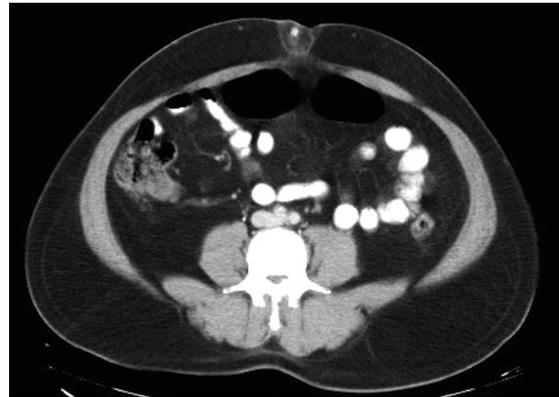


Fig. 2 Axial CT image taken at the level of the umbilicus shows a well-defined radiodense focus having a CT value of 160 HU. No evidence of any collection or stranding is noted.

In Case 2, a 40-year-old man, a carpenter, presented with epigastric pain and vomiting of two days' duration. Computed tomography (CT) of the abdomen showed cholelithiasis and grade C pancreatitis. Incidental note was made of a hyperdense focus measuring 0.8 cm × 0.6 cm, and having a CT value of 160 HU, within the umbilicus (Fig. 2). However, he did not have any umbilical symptoms such as pain or discharge.

Though the pathogenesis for an omphalolith is still not clearly understood, a few studies have shown a relation to the level of personal hygiene. The differential diagnosis would include umbilical cholesteatoma, dermatofibroma, and keloid.⁽¹⁾ Cross-sectional imaging shows a well-defined hyperdense focus within the umbilicus. In symptomatic patients, there may be associated abscess and subcutaneous oedema. MR imaging reveals a well-defined signal void on both T1- and T2-weighted sequences with no contrast enhancement. Microscopical examination shows keratin and amorphous material like sebum.^(1,2) Treatment is removal of the stone, and in some cases, excision of the umbilicus is performed to prevent recurrence.⁽³⁾ In our literature search, very few cases of omphalolith have been reported, and to the best of our knowledge, none with the imaging features.

Yours sincerely,

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