

## **Role of MSCT scan in management of patients with primary epiploic appendagitis; our experience**

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## Purpose

Primary epiploic appendagitis (PEA) is a rare cause of acute abdomen pain and can be often misdiagnosed with diverticulitis or appendicitis, because of the absence of specific symptoms.

Because of the benign self-limited course of PEA, it is important to recognise and understand its manifestations, in order to avoid unnecessary surgery and hospitalization.

The diagnosis of this condition relies firstly on multidetector CT ( MDCT). In this poster we illustrate the spectrum of CT findings in patient with PEA and its complications.

Our aim is to individuate typical CT findings of PEA which can help radiologists recognize this condition by using non invasive diagnosis, thus allowing the selection of the appropriate way of management .

## Methods and Materials

Seven patients (2 females, 5 males; range 12 to 60 years) with acute abdominal pain were included in our study. All patients underwent MDCT scan (16 rows for 4 patients and 128 rows for 3 patients) before and after iodinated contrast medium administration (320 mgI/ml).

Images were evaluated at dedicated work-station using axial images and multi-planar reconstructions (MPR).

The CT scans of the epiploic appendagitis were evaluated for a focal fatty center, the presence of colon wall thickening, inflammatory changes, location in relationship to the colon, size and presence or absence of central high density within the fat.

Six patients were managed conservatively with oral FANS and antibiotics and recovered in about 10 days. One patient showed an abscess diagnosed as a complicated PEA after surgery

## Results

Epiploic appendages are fatty appendages originating in two rows parallel to the toenia coli. Their limited blood supply together with their pedunculated shape and excessive mobility make them prone to torsion and ischemic infarctions.

PEA refers to inflammation in the epiploic appendages caused by spontaneous torsion of its vascular stalk.

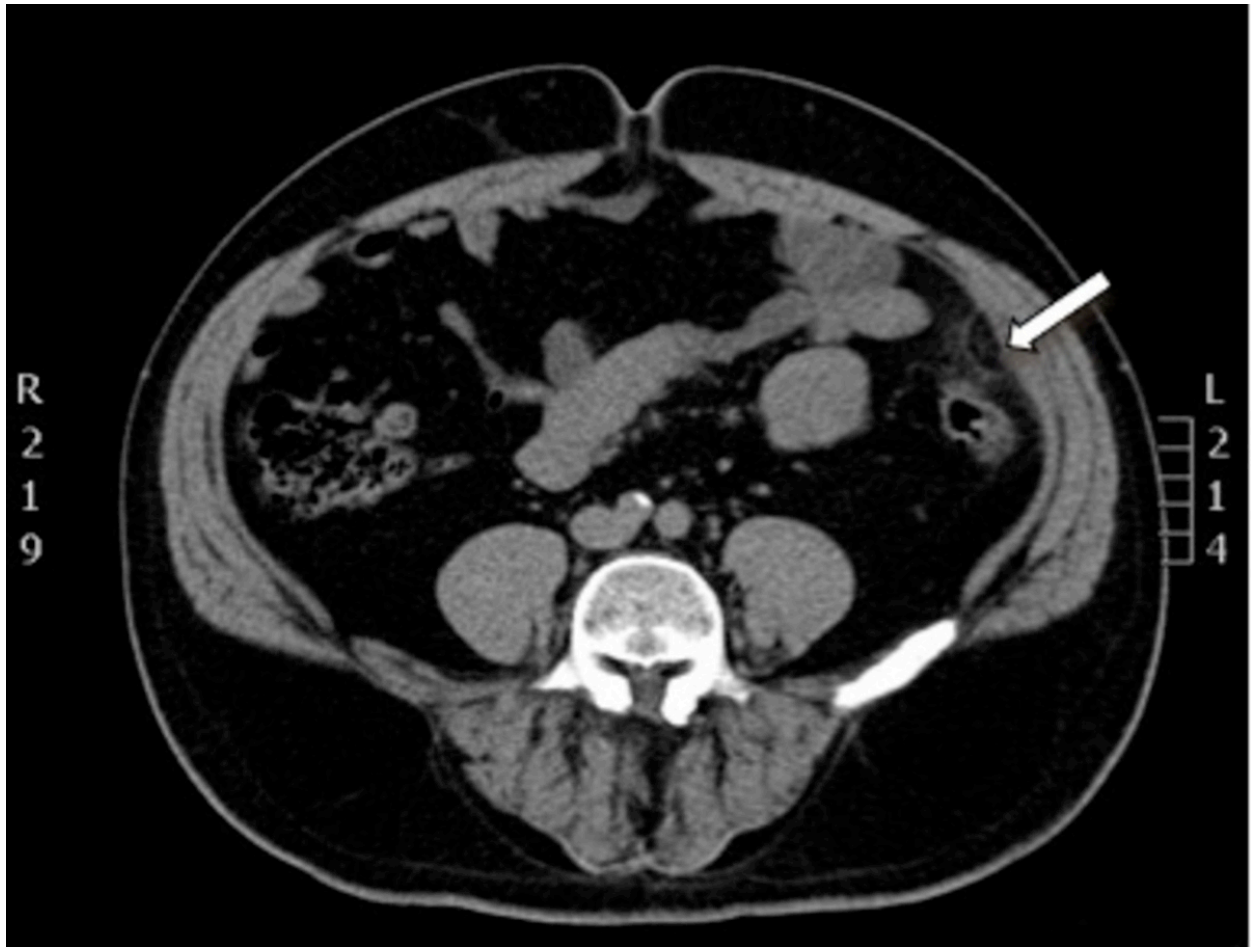
All patients came to our attention with acute abdominal pain: 5 patients had left lower quadrant pain, 2 patients right lower quadrant pain. All patients were afebrile and only 4 showed mild leukocytosis. Physical examination revealed a localized abdominal tenderness in all patients

- In six of our patients the inflamed epiploic appendage on CT appears as a 1-4 cm ovoid pericolic lesion with fat density surrounded by a 2-3 mm hyperdense rim, sign of inflamed visceral peritoneal covering (fig.1): this represents the diagnostic sign of PEA. Other findings were asymmetric wall thickening of the adjacent side of the colon and fat stranding (fig. 2).

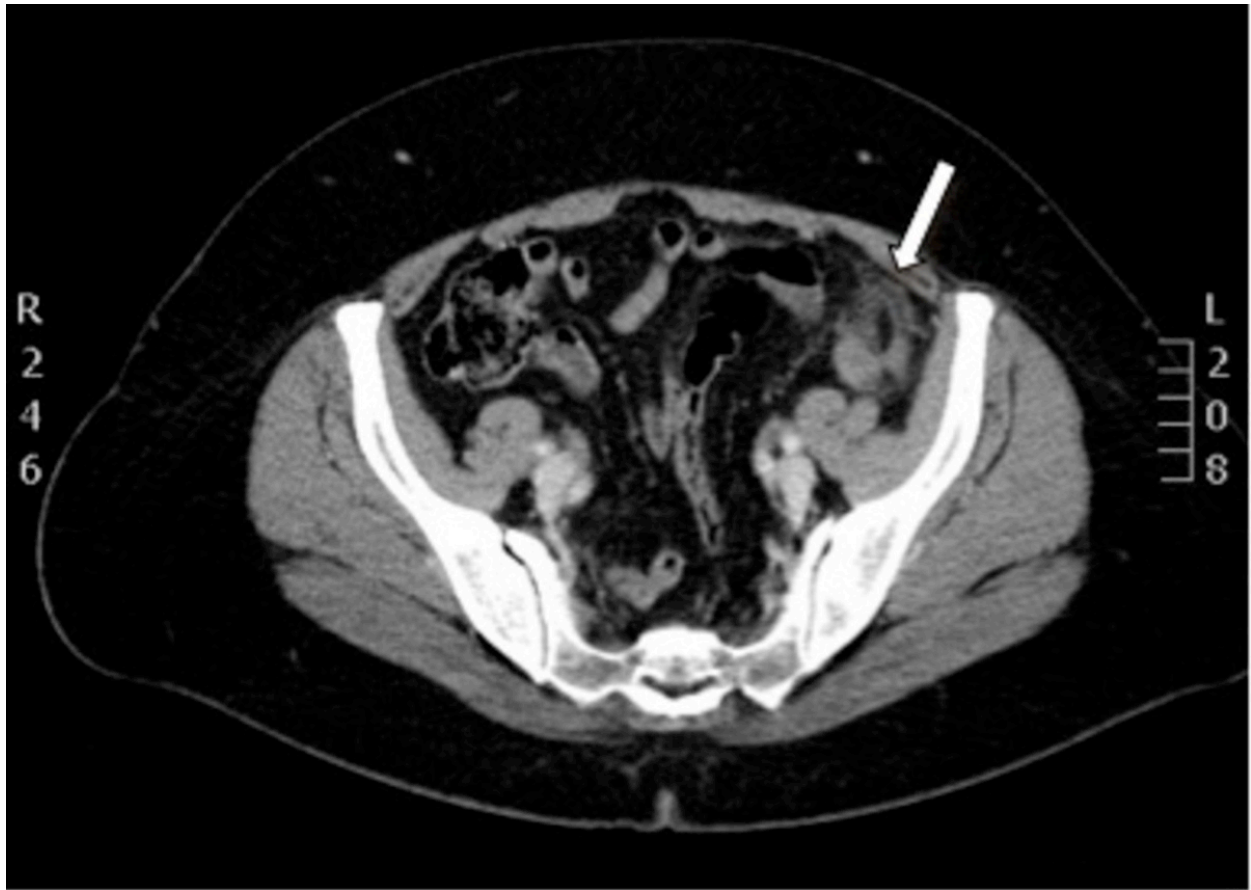
These patients were treated conservatively with oral FANS and antibiotics.

- One patient showed at first MDCT a multiloculated mass next to the right flexure of the colon (fig. 3) that was diagnosed as an abscess arising from a complicated PEA after surgery.

**Images for this section:**



**Fig. 1:** Male patient, 55 y.o. Unenhanced MDCT axial image shows clearly an ovoid pericolic lesion with hyperdense rim and fat stranding in the left lower quadrant.



**Fig. 2:** Female patient, 60 y.o. Enhanced MDCT axial image showing an ovoid lesion with fat density surrounded by a hyperdense rim in the left lower quadrant, next to the colonic wall.



**Fig. 3:** Female patient, 12 y.o. Enhanced MDCT coronal image showing a multi-loculated mass with irregular border, enhancing layer, internal dissepiments and fluid content next to the right flexure of the colon. This mass was diagnosed as an abscess arising from a PEA after surgery.

## Conclusion

PEA is very rare and because of non specific symptoms and signs, it is often misdiagnosed: today this condition can be well recognised with a good confidence with MDCT.

The most common CT features we found is an oval lesion less than 5 cm that has an attenuation equivalent to that of fat, that abuts the anterior colonic wall and that is surrounded by inflammatory changes. Thickening of the parietal peritoneum and of the colonic wall also may be observed.

Inflammation of epiploic appendages is self-limited in the majority of patients, but rarely may result in adhesion, bowel obstruction, intussusception, peritonitis and abscess formation.

On MDCT, PEA has a predictable appearance in terms of location, size and density. High resolution MPR imaging helps improve diagnostic confidence (site and adverse features) compared with standard axial images.

**C.e. MDCT in an useful non-invasive method for differential diagnosis of acute PEA which helps avoiding unnecessary surgery in most patients . The appropriate management of this condition is conservative, and the radiologist can provide guidance to supportive management.**

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## **Personal Information**