

An unusual cause of acute abdomen—epiploic appendicitis: report of two cases

Busra Burcu,¹ Ozgur Ekinici,¹ Ibrahim Inan,² Ferman Tevfik Ozyalvac,¹
Turgut Tunc Eren,¹ Orhan Alimoglu¹

¹Department of General Surgery, Istanbul Medeniyet University, Goztepe Training and Research Hospital, Istanbul, Turkey

²Department of Radiology, Istanbul Medeniyet University, Goztepe Training and Research Hospital, Istanbul, Turkey

ABSTRACT

Epiploic appendices, first described in 1543 by Vesalius, are fatty structures which are attached through the length of the colon and consisted of visceral peritoneum. Epiploic appendicitis is an uncommon and self-limiting disease. In this report, we aimed to present two patients with epiploic appendicitis.

Keywords: Colon; epiploic appendicitis; epiploic appendix.

Primary epiploic appendicitis which is characterized by inflammation of epiploic appendices because of torsion or spontaneous venous thrombosis was described firstly in 1956 by Lynn as right or left lower quadrant pain with a rapid onset [1]. This inflammatory process of peritoneal vesicles around colonic segments extending from caecum to rectosigmoid junction, and appendix vermiformis occurs frequently in the location of sigmoid colon, and caecum [2]. Since it can be confused with acute appendicitis, and acute diverticulitis, it is important to detect this disease which requires conservative treatment. Ultrasound (US), and especially computed-tomography (CT) yield us characteristic data resulting in correct diagnosis.

CASE REPORT

Case 1 – A 27-year-old male patient consulted to us with abdominal pain lasting nearly six hours. His medical history was unremarkable. On physical examination localized tenderness, and guarding were palpated on the left lower quadrant. His laboratory findings were nonspecific (WBC 11.800/mm³, hemoglobin 16 gr/dl, CRP 0.6 mg/dl). On US, a hyperechoic omental fatty tissue in the lower left quadrant measuring 43x17 mm was observed. On CT, an increase in density on the rim of the mesentery, and in the vicinity of sigmoid colon which suggested the presence of epiploic appendicitis (Figure 1). Medical treatment was applied. On

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Correspondence: Dr. Busra BURCU. Istanbul Medeniyet Univeristesi, Goztepe Egitim ve Arastirma Hastanesi, Genel Cerrahi Anabilim Dalı, Istanbul, Turkey.

Tel: +90 216 - 570 91 85 e-mail: b_kargo_b@hotmail.com

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the fourth day of the treatment he was discharged, and in the fifth month of his follow-up period any disease recurrence was not detected.

Case 2 – A 72-year-old female patient presented to the outpatient clinic with abdominal pain lasting for 3 days. His medical history was unremarkable except for diabetes mellitus. On physical examination upper, and lower left quadrants were tender to palpation. His laboratory findings were nonspecific (WBC 10.500/mm³, hemoglobin 13 gr/dl, CRP 1.2 mg/dl). On CT, pericolon fatty tissue was inflamed, edematous, and increased density on mesentery was seen which was in compliance with epiploic appendicitis (Figure 2). The patient received medical treatment. Any disease recurrence was not detected in 3. month of the follow-up period.

DISCUSSION

Epiploic appendices are oval-shaped 1–2 cm thick small peritoneal processes measuring 0.5–5 cm in length which are found as arrays of two rows along taenia coli, and attached with a vascular pedicle to the serous coat of the large intestine [2]. Although they are more diffuse in sigmoid colon (57%), and ileocecal region (26%) only 50–100 epiploic appendages are seen in the whole colon [3, 4]. They are perfused by one or two small terminal branches of colonic vasa recta, and drained through a single vein. They have pedicles which gave them ability to move freely [5]. Their role in immunity as is seen with omentum, and their involvement in colonic absorption have been already indicated [5]. In our cases, inflammation was localized in the sigmoid colon in compliance with the literature findings.

Epiploic appendicitis is primary or secondary inflammation of epiploic appendices. In intraabdominal inflammatory events as diverticulitis, appendicitis, and cholecystitis, epiploic appendicitis develops. Its treatment is symptomatic. Primary epiploic appendicitis (PEA) is ischemic or hemorrhagic infarct, and inflammation as a result of appendiceal torsion or spontaneous venous thrombosis. It is a very rarely seen self-limiting disease with a benign course. Golash et al. detected PEA in only 8 out of 13.200 patients with acute abdominal pain [6]. Right-sided PEA can be confused with acute

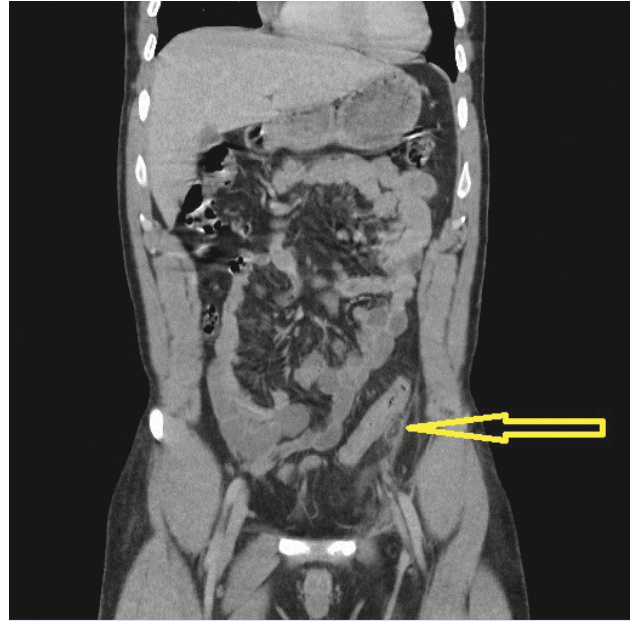


FIGURE 1. Case 1 CT image.

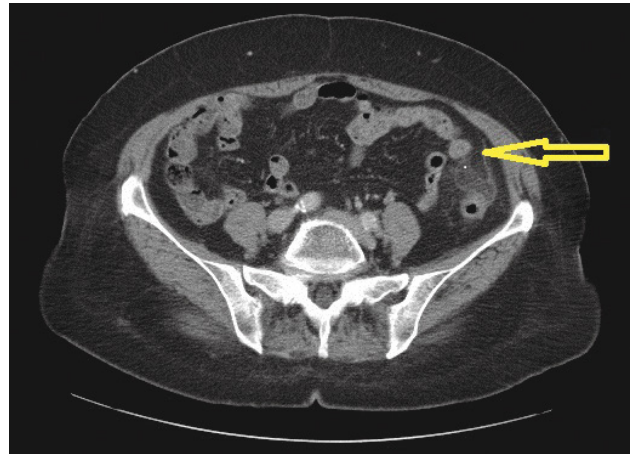


FIGURE 2. Case 2 CT image.

appendicitis, right colonic diverticulas, however left-sided PEA is frequently mistaken for sigmoid colon diverticulitis. It is important to consider these disease groups with different treatment protocols in the differential diagnosis of epiploic appendicitis.

Primary epiploic appendicitis can be seen between 12, and 82 years of age which peaks in the 4.–5. decades, and it is slightly more frequently seen in men [2]. Obesity is reported as a risk factor [6]. Body mass indices of our cases (BMIs) were within normal limits.

PEA has a nonspecific clinic. Generally it encounters us as localized lower quadrant pain with sudden onset. Sharp pain can be demonstrated specifically [4]. However tenderness, and localized guarding can occur without rigidity [7]. Rarely nausea, vomiting, loss of appetite, and other gastrointestinal symptoms rarely accompany this clinical entity. Generally, high fever is not seen [5]. Palpable masses have been reported in 10–30% of the cases [2]. In our first case, sharply localized lower left quadrant pain was found, while in our second case tenderness on upper, and lower left quadrant was detected.

PEA has not any pathognomonic laboratory finding. Generally, normal or slightly elevated leucocyte counts, and CRP levels are found.

US, and CT are reliable diagnostic tools. Operator-dependency, and suboptimal results obtained in obese patients are disadvantages of US. On US they are seen as well-circumscribed, non-compressed, heterogenous ovoid or round masses which contain peripheral hypoechoic rim, and they are localized in the close vicinity of the large intestine. On colour-Doppler, US blood flow can not be detected [8].

As firstly reported by Danielson et al. in the year 1986, PEA demonstrates characteristic CT findings [1]. It encounters us as round or oval masses on the anterolateral aspect of the colon with a slightly higher density when compared with peritoneal fat. A hyperdense peripheral rim is present around the lesion. In the center linear, and punctuate hyperdensity which represents thrombosed vein can be seen [3]. Diverticulitis, omental infarct, mesenteric panniculitis, primary omental tumour, and metastases which contaminate fatty tissue are considered in the differential diagnosis. Acute diverticulitis is frequently seen in elder patients, and often consolidation of the wall of the long segment was found. Signs of diverticulitis including abscess, fistula, obstruction, and perforation are not usually seen in PEA. Omental infarct is rather a disease of the pediatric age group. Findings of CT, include focal, subtle, soft tissue infiltration of the omentum or solitary, great, non-contrasted heterogenous, and hyperdense fatty mass localized on the greater omentum. Hyperattenuated ring, and central spot seen in PEA are not observed in omental infarct. However omental metastases confront us with soft

tissue implants on the peritoneal surface. Omental cake is seen as a thick soft tissue mass adjacent to the ventral aspect of the transverse colon [4]. CT is a noninvasive tool which enables us to make a differential diagnosis among all these diseases. We made a diagnosis using CT in our two cases. Characteristic CT findings can persist up to 6 months [6]. During our controls, though regressed, we have seen persistence of CT signs.

Since its first description of PEA in the year 1968, it is treated conservatively, and with analgesic, and antibiotic use, the patient is discharged within less than 10 days [5]. In suspect cases, laparoscopy is predominant in that it enables us to make a diagnosis, and apply treatment. In the past, the standard treatment of PEA was excision because it could be diagnosed only intraoperatively. However nowadays some authors still recommend surgical treatment. Sand et al reported recurrence rate of 40 percent [2]. Disease of the cases in their 3., and 5. months of the follow-up period are still coursing without any recurrence.

This very rarely disease which has a good prognosis can lead to malpractice. It can be confused with acute appendicitis, acute diverticulitis, ovarian torsion, enteritis, typhilitis, mesenteric lymphadenitis, and colorectal cancer. It can cause prolonged hospital stay, unnecessary antibiotic use, and surgical intervention.

In conclusion, in cases with suspect lower abdominal quadrant pains, CT is effective in making a diagnosis of PEA with increased sensitivity, and specificity. When we detect a benign disease of PEA, we can prevent unnecessary invasive procedures.

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REFERENCES

1. Sand M, Gelos M, Bechara FG, Sand D, Wiese TH, Steinst-raesser L, et al. Epiploic appendagitis--clinical characteristics of an uncommon surgical diagnosis. *BMC Surg* 2007;7:11.
2. Hwang JA, Kim SM, Song HJ, Lee YM, Moon KM, Moon CG, et al. Differential diagnosis of left-sided abdominal pain: primary epiploic appendagitis vs colonic diverticulitis. *World J Gastroen-*

- terol 2013;19:6842–8.
3. Koplay M, Özbek S, Sivri M, Alptekin H, Erdoğan H, Nayman A. Primary epiploic appendagitis: Clinic and radiologic imaging findings. *Dicle Medical Journal* 2013;40:264–8.
 4. Egeli T, Aslan A, Taşkesen F, Okudan M, Özdemir M, Özlü M. An unusual cause of acute abdominal pain: Primary appendagitis epiploica report of two cases. *Journal of The Turkish Society of Colon and Rectal Surgery* 2011;21:202–7.
 5. Choi YU, Choi PW, Park YH, Kim JI, Heo TG, Park JH, et al. Clinical characteristics of primary epiploic appendagitis. *J Korean Soc Coloproctol* 2011;27:114–21.
 6. Rashid A, Nazir S, Hakim SY, Chalkoo MA. Epiploic appendagitis of caecum: a diagnostic dilemma. *Ger Med Sci* 2012;10.
 7. Karakoc SC, Yetkin G, Citgez B, Uludag M, Akgün I, Kartal A. Appendicitis epiploicae: a rare cause of acute abdomen. *BMJ Case Rep* 2010;2010.
 8. Yavuz K, Atasoy Ç, Aykar S, Kuzu A. Primary epiploic appendagitis: computerized tomography findings. *Academic Gastroenterology Journal* 2002;1:60-2.