

A Diagnosis That Should be Considered in Patients Coming to The Emergency Service with Abdominal Pain: Primary Appendagitis Epiploica

Acil Servise Karın Ağrısı ile Başvuran Hastada Akla Getirilmesi Gereken Bir Tanı:
Primer Epiploik Apandisit

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ABSTRACT

Primary epiploic appendagitis; occurs as a result of torsion, infarction and inflammation of epiploic appendices that serve to assist mechanical protection and peristaltic movement of the colon.

Physical examination and laboratory findings may mimic various causes of abdominal pain requiring emergency surgery. However, medical treatment is often sufficient and effective in the treatment of PEA. Fast and true diagnosis is crucial in preventing unnecessary interventions. The gold standard imaging method in diagnosis is tomography. In our case presentation, a patient that has applied to our emergency room with stomachache and nausea complaints, has been diagnosed with PEA and successfully treated by means of conservative methods has been discussed.

ÖZET

Primer epiploik apandisit; kolonun mekanik koruma ve peristaltik harekete yardımcı olmak ile görevli epiploik apendikslerinin torsiyonu, infarkt ve inflamasyonu sonucu ortaya çıkmaktadır. Fizik muayene ve laboratuvar bulguları ile acil cerrahi müdahale gerektiren çeşitli akut karın tablolarını taklit etmekle birlikte sıklıkla medikal tedavinin yeterli ve başarılı olduğu benign seyirli bir hastalıktır. Gereksiz cerrahi müdahalelerin önlenmesi için hızlı ve doğru tanı önemlidir. Tanıda tomografi altın standarttır. Olgu sunumumuzda karın ağrısı ve bulantı ile acil servisimize başvuran PAE tanısı koyduğumuz ve konservatif yöntemler ile başarı ile tedavi ettiğimiz bir hastamız ele alınmıştır.

Keywords:

Primary appendagitis epiploica
Stomachache
Acute abdomen

Anahtar Kelimeler:

Primer epiploik apandisit
Karın ağrısı
Akut karın

INTRODUCTION

Firstly epiploic appendices that are defined by the anatomist Vesalius are the serosa-covered structures that may be present in entire area of the colon except rectum, and they are 1-2 cm in thickness, 0.5-5 cm in length and contain adipose tissue and vascular formations (1,2). Primary epiploic appendagitis (PEA) is a rare inflammatory disorder of these structures. It is frequently a kind of disorder that is self-limited and responds to medical treatment. Early and accurate diagnosis is important to prevent unnecessary surgical interventions. In our case presentation, a 44-year-old female patient who has applied to our emergency room with stomachache and nausea complaints has been diagnosed with the PEA has been discussed.

CASE

Our patient was informed about the case report and informed consent was obtained from her. 44-year-old female patient has applied to the emergency room of our hospital with extensive complaints of stomachache and nausea that have been continuing for 2 days and marked in left lower quadrant. The patient has been diagnosed with diabetes for 6 years and using metformin 1000 mg 2x1 posology since

she was diagnosed. On physical examination, there was a fever of 37.6°C, tenderness and defense in the left lower quadrant. In the laboratory examination, no features were found in neutrophil predominance except leukocytosis and high C-reactive protein (CRP) (Table). Intense colonic gas shadows were present on direct abdominal X-ray. Oral and intravenous contrast-enhanced tomography was planned. In tomography, lesions compatible with the epiploic appendagitis with contrast involvement in its periphery were observed in central adipose density in right paracolic area in distal descending colon in 1 mm successive axial contrast sections. Fatty streaks compatible with inflammation and density increasement were detected in adjacent mesenteric adipose tissue (Figure) Findings were interpreted as appendagitis epiploica. Surgical interventions were not planned for the patient. The patient was interned for medical treatment. Hydration, antibiotherapy (ceftriaxone 1-gram 2x1, metronidazole 500 mg 3x1), anti-inflammatory and antiemetic treatment were initiated. It was observed that the clinical findings of our patient improved on the 3rd day of the follow-up, and the clinical findings were completely regressed and the laboratory parameters returned to normal on the 7th

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Cite as: Yiğit E, Mert T, Metin MR. A Diagnosis That Should be Considered in Patients Coming to The Emergency Service with Abdominal Pain: Primary Appendagitis Epiploica. Phnx Med J. 2022;4(2):87-89.

Received: 20.10.2021

Accepted: 07.12.2021



Table: The results of blood and urine tests of the patient in the time of application

| Laboratory Test | Result | Unit |
|-----------------|--------|------------------|
| ALT | 20 | U/L |
| AST | 13 | U/L |
| Urea | 21 | mg/dL |
| Creatinine | 0.81 | mg/dL |
| Amylase | 31 | U/L |
| Lipase | 19 | U/L |
| WBC | 10.900 | /mm ³ |
| Neutrophile | 78 | % |
| Hgb | 13.1 | g/dL |
| Plt | 295 | /mm ³ |
| CRP | 87.5 | mg/L |

ALT: Alanine aminotransferase, AST: Aspartate aminotransferase, Hgb: Hemoglobin, Plt: Platelet, WBC: White blood cell, CRP: C reactive protein

day of the follow-up.

DISCUSSION

The number of the epiploic appendix that are present throughout the colon from cecum to rectosigmoid region is about 50-100 (3). The epiploic appendix that serves to assist mechanical protection and peristaltic movement are fed by colic artery branches (4). They may be exposed to torsion and infarction as a result of their weak blood flow and pedicled formations that enable them to move freely. This case causes PAE advancement that is a rare disorder progressing with inflammation (5). If an inflammation in epiploic appendix occurs indirectly as a seconder to another intraabdominal inflammatory pathology (cholecystitis, pancreatitis, diverticulitis, appendicitis etc.), this case is called secondary epiploic appendagitis (SEA) (6). PEA incidence is worldwide determined as 8.8/1.000.000 (7). PAE may be seen in every age and also peaks between 4th and 5th decades and men are slightly more susceptible compared to women (8, 9). Blinder et al. determined that 52.7% of the disorder was in sigmoid colon, 19% in cecum, 15% in ascending colon, 6.6% in descending colon and 6.6% in transverse colon in a literature review in which they investigated 167 patients diagnosed with PEA (10). The fact that the epiploic appendix present in sigmoid colon and cecum are more involved is probably resulted from their longer and thicker formations (11). PEA is presented by stomachache. Stomachache may be accompanied by nausea and vomiting. Pain may be seen in all quadrants in all abdomens. In a study in which 45 patients diagnosed with PEA in Marmara University have been retrospectively evaluated, it has been observed that pain has been most frequently seen in left lower quadrant with the rate of 41%, which is respectively followed by right lower quadrant (35%), right upper quadrant (0.4%) and left upper quadrant (0.02%) localizations. (3). Depending on the location in the colon, it can imitate pathologies that require urgent surgical intervention such as acute cholecystitis, diverticulitis, appendicitis. Due to the progressing process with inflammation, elevation of subfebrile fever, leukocytosis and acute phase reactants

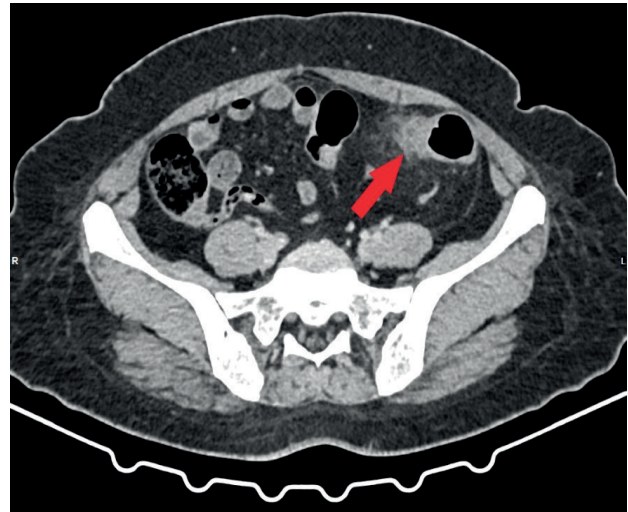


Figure: Lesions compatible with the epiploic appendagitis with contrast involvement it its periphery, central adipose density in right paracolic area in distal colon descending in axial contrast sections.

may be observed. Uncompressed mass lesions adjacent to colon may be seen in abdominal ultrasonography (12). Blood flow cannot be detected within lesion field in color doppler ultrasonography (13). The gold standard imaging method in diagnosis is tomography. Normal epiploic appendix cannot be seen in tomography. In the case of PEA, pericolonic round or oval shaped pedicled structures with fat density due to inflammation are seen on tomography (14). In the case of SEA, additional findings such as thickening of the colon wall, narrowing of the lumen and pericolonic fluid accumulation may be observed. The treatment of the primary pathology that causes the inflammation in SEA is essential. As in our case, PEA is mainly a self-limited disorder that responds well to the conservative methods including appropriate antibiotic and anti-inflammatory therapy, however complications such as peritonitis, adhesion, obstruction, abscess development may rarely occur (15, 16). In such cases, immediate surgical interventions are required. Additionally, when the literature is examined, it can be seen that some authors have proposed that surgical interventions may also be advantageous for preventing early recurrences (9). In surgery, the excision of inflamed epiploic appendix with laparoscopic method is essential (17). In a histopathological study of the epiploic appendix that are surgically extracted in PEA, thrombosed blood vessels and acute infarction accompanied by fat necrosis, inflammatory cells, perivascular hemorrhage findings are seen (18).

CONCLUSION

PEA is a benign disease that can mimic various disorders that require immediate surgical intervention with physical examination and laboratory findings. It should definitely be considered in patients who apply to the emergency services with the complaint of abdominal pain. In this disorder that can be accurately diagnosed by means of tomography, surgical interventions must not be resorted immediately. Conservative methods in treatment are frequently enough and effective.

Conflict of interest: Authors declare no conflict of interest.

Ethic: Informed consent was obtained from the patient.

Approval of final manuscript: All authors

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