

Differential diagnosis of abdominal pain in geriatric patients: Self-limiting abdominal aortic aneurysm rupture

Geriyatrik hastalarda karın ağrısının ayırıcı tanısı: Kendini sınırlayan abdominal aort anevrizması rüptürü

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ABSTRACT

Abdominal pain in the geriatric age group is one of the most complex and time-consuming complaints among the causes of emergency room visits. The incidence of abdominal aortic aneurysm in elderly is 4-11%. Though presence of the triad consisting of hypotension, back pain, and pulsatile mass facilitates establishment of diagnosis in the elderly, but hypotension does not occur at an early stage in most of them. In addition, this classical triad is seen in only 30-50% of the patients. The atypical group of elderly patients can be misdiagnosed in up to 50% of the cases. In this case report, we discussed the treatment approach in a 80-year-old woman with colicky abdominal pain for two weeks who had received different diagnoses at multiple medical institutions.

Keywords: Abdominal pain, elderly, abdominal aortic aneurysm

ÖZ

Geriyatrik yaş grubundaki karın ağrıları, acil servis başvuru nedenleri arasında en karmaşık ve zaman alan yakınmalardan biridir. 60 yaş ve üzeri kişilerde abdominal aort anevrizması %4-11 sıklıkla görülmektedir. Yaşlı hastada hipotansiyon, sırt ağrısı ve abdome pulsatil kitle triadı tanıyı kolaylaştırmada yardımcı olsa da, hipotansiyon çoğu hastada erken dönemde ortaya çıkmamaktadır. Bu klasik üç koşulun hastalarda görülme sıklığı %30-50 arasında seyretmektedir. Bu hasta grubunda atipik tablo oldukça sık olup, %50'ye varan oranlarda hatalı tanı konulabilmektedir. Bu olgu sunumunda iki haftadır kolik tarzda karın ağrısı ve birden fazla medical kurum başvurusunda farklı tanı öyküsü olan 80 yaşındaki kadın hastada tedavi yaklaşımı tartışılmıştır.

Anahtar kelimeler: Karın ağrısı, yaşlı, abdominal aort anevrizması

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INTRODUCTION

The population aged 65 and older is increasing in Turkey as well as all over the World. According to the data of the Turkish Statistical Institute in 2014, 8% of the population of Turkey is ≥ 65 years old ⁽¹⁾. As a result of progressive change in the demographics of the population higher number of elderly patients are served in the emergency department (ED). In a remarkable research on this subject, it has been shown that 24% of the ED admissions consisted of

elderly patients ⁽²⁾. Elderly patients constitute a special group for ED as well as in other fields, because this age group is often admitted to ED with more serious problems than youngers ⁽³⁾.

Abdominal pain in geriatric patients is one of the most complex complaints leading to ED admissions ⁽⁴⁾. It was reported that abdominal pain was responsible from 3% to 13% of ED admissions among elderly ⁽⁵⁾. However, considering that the determined rate of correct diagnosis ranges between 40, and 82% for geriatric patients in the emergency department

(6,7); we can assume that the abdominal pain should be treated more carefully in this age group.

Abdominal Aortic Aneurysm (AAA) is seen 4-11% of the people aged 60 years and older. Although AAA often treated surgically, delayed intervention can result in high mortality rates (8). Ruptured or symptomatic AAA with classic triad is only seen in half of the patients and these patients may also be symptomatic with atypical symptoms as epigastric pain spreading to the back and pelvic complaints (4).

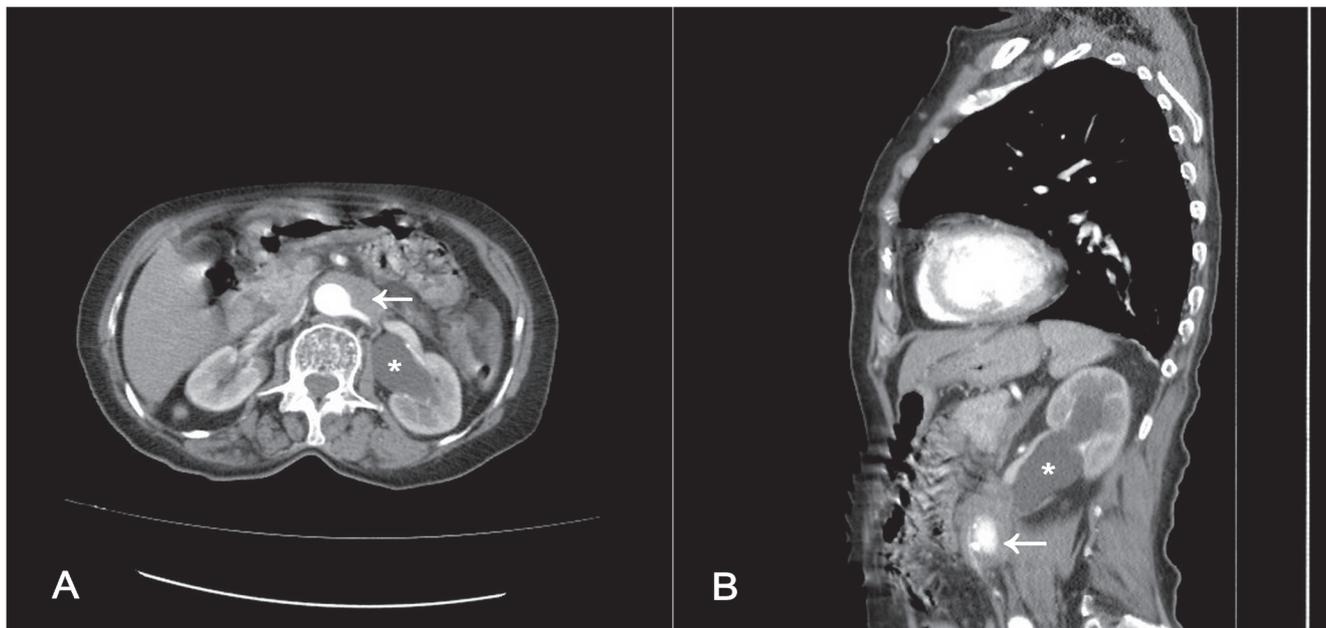
In this article, the patient with AAA who had occasional complaints of abdominal pain has been presented. The patient had previously consulted more than one center before the ED application within the last 15 days and undergone endovascular stent-graft for treatment.

CASE REPORT

A 80-year-old female patient admitted to the ED of Celal Bayar University in a conscious, cooperative, and oriented state. Vital values on admission were as follows: arterial blood pressure: 134/74 mmHg, pulse rate: 83/min, fever 36.8°C, respiratory rate 18/min, and

oxygen saturation 94%. It was learned from the patients' history, the patient had applied to different medical centers with complaints of abdominal and left intermitting flank, and back within the previous 2 weeks. We also learnt from his history that he had undergone abdominal ultrasound, abdominal X-ray of the foot, unenhanced abdominal CT and colonoscopy examinations within previous two weeks. As a result of these investigations, the patient had received diagnoses of left renal cyst, renal colic, and urinary tract infection. The examination in the ED did not reveal any immediate systemic findings except abdominal signs. At the abdominal examination, there were minimal tenderness on the epigastric and suprapubic region, also significant vertebral angle tenderness in the left. Extremity examination was normal, blood pressure and heart rate measurements were unremarkable. Complete blood count, biochemistry and urine examination were requested. Radiological examinations as standing abdominal X-ray and intravenous (IV) contrast-enhanced abdominal CT were performed.

In IV contrast abdominal CT; Grade 2 left pelvic-lyceal ectasia extending to the level of the proximal ureter and at this level bleeding from the AAA into



→ Extravasation and self-limiting Acute Aortic Dissection
* Left pelvic-lyceal ectasia

Figure 1. Sectional view of the self-limiting aortic dissection in computed tomography.

retroperitoneal region which spread to infrarenal and para-aortic areas, and completely surrounding the aorta was detected. Aortic diameter was about 1.5 cm, while its craniocaudal segment had a diameter of 6.5-7 cm; and wall thickness up to 1.5 cm. Soft tissue density (extravasation) surrounding the aorta was seen which contained the bleeding (Figure 1). The patient with a diagnosis of abdominal aortic aneurysm rupture were consulted to the Department of Cardiovascular Surgery.

Endovascular grafting was planned for the patient with detected self-limiting bleeding, and AAA rupture. After a successful endovascular surgery, she was sent home with no complications on the third postoperative day. A further clinic control was suggested for pelviccalyceal ectasia in the left kidney.

DISCUSSION

AAA rupture today is still causing high rates of mortality and morbidity. In case of rupture, mortality is around 50-60%⁽⁹⁾. It is seen in only 30-50% of the patients with classic triad in elderly patients with AAA⁽¹⁰⁾. In this group of patients, atypical presentations may be seen quite often which are responsible for misdiagnoses in up to 50% of the cases. The most frequent misdiagnosis is renal colic. Indeed microscopic hematuria may be caused by irritation of AAA rupture⁽⁴⁾. Another important point in the prognosis of AAA rupture is related to its retroperitoneal or intraperitoneal location. Although intraperitoneal rupture induces a very rapid hemodynamic deterioration, and requires immediate surgical intervention, retroperitoneal rupture can rarely remain stable for a long time without causing hemodynamic deterioration⁽¹¹⁾. Though AAA is a serious disease, usually classic symptoms, signs and laboratory results may not be seen⁽³⁾. In our case, the patient with intermittent, and occasional episodes of abdominal and left flank pain had consulted different medical centers within the last 2 weeks before admission to ED.

We want to highlight with this case, that AAA may progress often quite atypically and the misdiagnosis rate for AAA may reach up to 50%. At the same time it is to be noted that the most common misdiag-

nosis is renal colic among various entities in differential diagnosis. Both physicians working in the emergency room, and those serving in all levels of health care should be more careful about the approach to abdominal pain in elderly patients.

Competing Interests: The authors declare that they have no conflicts of interest.

Authors' Contributions: Study concept and design belonged to HE and AB. HE, and MI wrote the manuscript and assumed the responsibility of the final content. All authors read and approved the final manuscript.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

REFERENCES

1. Aydemir B. İstatistiklerle Yaşlılar 2014. TÜİK Matbaası, Ankara, 2015. s. 1-38.
2. Samaras N, Chevalley T, Dimitrios Samaras D, Gold G. Older patients in the emergency department: A review. *Ann Emerg Med.* 2010;56(3):261-9. <https://doi.org/10.1016/j.annemergmed.2010.04.015>
3. Saritaş A, Kandış H, Baltacı D. Approach to geriatric disease in emergency services. *JAEM.* 2013;12:93-7. <https://doi.org/10.5152/jaem.2013.003>
4. Ersel M. Approach to acute abdominal pain in geriatric patient. *Ege Tıp Dergisi.* 2014;53(Supl.):26-37.
5. Esses D, Birbaum A, Bijur P, Shah S, Gleyzer A, Gallagher EJ. Ability of CT to alter decision making in elderly patients with acute abdominal pain. *Am J Emerg Med.* 2004;22 (4):270-2. <https://doi.org/10.1016/j.ajem.2004.04.004>
6. Lewis LM, Banet GA, Blanda M, Hustey FM, Meldon SW, Gerson LW. Etiology and clinical course of abdominal pain in senior patients: A prospective, multicenter study. *J Gerontol A Biol Sci Med Sci.* 2005;60(8):1071-6. <https://doi.org/10.1093/gerona/60.8.1071>
7. Marco CA, Schoenfeld CN, Keyl PM, Menkes ED, Doehring MC. Abdominal pain in geriatric emergency patients: Variables associated with adverse outcomes. *Acad Emerg Med.* 1998;5(12):1163-8. <https://doi.org/10.1111/j.1553-2712.1998.tb02689.x>
8. Sayın AG. Overview of Abdominal Aortic Aneurysms. *İ.Ü. Cerrahpaşa Tıp Fakültesi Sürekli Tıp Eğitimi Etkinlikleri Sempozyum Dizisi.* 2006;(52):135-148.
9. Yazgan Ö, Yazgan S, Büyükkaya A, Büyükkaya R. Spontaneous thrombosed ruptured aortic aneurysm. *Abant Medical Journal.* 2015;4(1):84-6. <https://doi.org/10.5505/abantmedj.2015.92408>
10. Banerjee A. Atypical manifestations of ruptured abdominal aortic aneurysms. *Postgrad Med J.* 1993;69(807):6-11. <https://doi.org/10.1136/pgmj.69.807.6>
11. Kutay V, Ekim H, Karadağ M, Yakut C. Surgical Repair of Retroperitoneal Region Ruptured Giant Abdominal Aortic Aneurysm. *Van Tıp Dergisi.* 2004;11(1):29-31.