Abdominal aortic aneurysm: Let us recall the old physical examination

Marco Orsini, Silvia Alves, João Alberto Silveira Vianna, Carlos Henrique Melo Reis, Antônio Marcos da Silva Catharino, Acary Bulle Oliveira

ABSTRACT

Introduction: Abdominal aortic aneurysms often surreptitiously expand and sometimes rupture. In most cases they cause a pulsing sensation in the abdomen. In cases of rupture, arterial grave hypotension occurs, sometimes followed by death. Physical examination is important and commonly directs physicians to perform Computed Tomography.

Case Report: We report a case of a 79-year-old woman, who reported that for approximately two years she has been suffering from expressive weight loss and discomfort due to a palpable “mass” in the abdominal region.

Conclusion: The long time elapsed between the complaints reported by the patient and the clinical and imaging diagnosis caught our attention. It is imperative for physicians, of any specialty, to assess patients globally and not only by subspecialty models.

Keywords: Abdominal, Aneurysm, Aorta, Dilation, Rupture

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INTRODUCTION

Abdominal aortic aneurysms are usually found randomly through ultrasound or computed tomography examinations of the abdomen [1]. The abusive use of nicotine and carbon monoxide causes depletion of elastin in the arterial layers, compromising the aortic wall. In addition, in most abdominal aortic aneurysms, thrombosis and wall calcifications occur, both originating from the atherosclerotic process [2]. Several factors threaten the vascular endothelium, such as smoking, lipid products, systemic arterial hypertension (SAH), among others. We illustrate the case of a patient with extensive abdominal aortic aneurysm and pay attention to the urgent nature of its approach [3–5].

CASE REPORT

A 79-year-old, female, domestic, reported that about two years ago she had started to lose weight, had dizziness, lower back pain, and a feeling of fainting. Months later, she noticed a palpable mass in the abdomen. During this time, she had been seen by countless doctors from the family clinic that she considers a lipoma. She was provided assistance at a health center due to moderate hypertension, diabetes, dyslipidemia smoking history of

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3 packs/day, and alcoholism. When seeking help at the neurology clinic due to suspicion of Parkinson's disease, she reported the symptoms. On physical examination, a possible painless, mobile “mass” was identified, with the presence of murmurs on auscultation and “flag sign.” The measurement of systemic blood pressure was evaluated with a patient in the supine position, sitting and standing, in the upper and lower arms, comparing both horizontally and vertically. Postural hypotension was identified in the maneuver of choice for the standing position (slide of 40 | 15 mmHg) of blood pressure. With the patient naked, the assessment of the arteries of the lower limbs was followed by palpation of the femoral, popliteal, posterior and anterior tibial pulses, and dorsal artery of the foot (pediosal). The arterial pulse was characteristic of a bisferiens pulse. After clinical evaluation, computed tomography of the abdomen was suggested as the exam of choice. Computed tomography imaging after venous contrast and with three-dimensional and volumetric reconstructions (Figure 1) showed fusiform aneurysmal dilatation of the extension of the infra-renal segment of the aorta. Maximum transverse diameters of 10 × 9.9 cm and longitudinal extension of 20 cm, starting at the origin of the right renal artery until the plane of the bifurcation (Figure 2). The proximal neck of the aneurysm had a rounded morphology and measured 3.5 cm in the longest axial axis (Figure 3). It presented a mural thrombus, which determined a pervious lumen of 5.3 × 4.2 cm. Lastly, the abdominal aorta was tortuous with diffuse atheromatous disease (Figure 3).
DISCUSSION

Abdominal aortic aneurysms (AAA) can develop in any age group, however, the prevalence is higher between 50 and 80 years. There is a relationship between hypertension and smoking. About 20% of abdominal aneurysms rupture over time. Abdominal aortic aneurysm rupture is more frequent in large aneurysms, with rapidly progressive growth or with recent onset of symptoms [5, 6].

In some cases, AAA may be associated with neoplasms, chronic renal failure resulting from atherothrombosis of the renal arteries, in addition to concomitant stenotic lesions in several arteries. The result of surgical risk was transmitted by the overlapping of pathologies associated with AAA, gender, and endovascular treatment, very effective against catastrophic rupture of such. The natural history of AAA demonstrates a continuous increase in the diameter of the dilation, most often culminating in rupture. The risk of rupture is proportional to size, with an annual rate of 0% for AAA smaller than 4 cm, 1% between 4 and 4.9 cm, 11% between 5 and 5.9 cm, and 25% or more for larger than 6 cm [7–9].

Our patient reported symptom onset about two years ago, although he considers rupture a high risk. Elective repair is a treatment option that, when indicated based on the size of the aneurysm and according to national guidelines, is recommended when the AAA is greater than 5.4 cm [6]. Currently, the indication for surgery or EVAR (Endovascular Abdominal Aortic Aneurysm Repair) for aneurysms larger than 5.4 cm is a consensus [6].

CONCLUSION

We present the case of a patient with extensive abdominal aortic aneurysm. In addition, we reinforce the need for early diagnosis and urgent treatment of the clinical picture and visualization by computed tomography.

REFERENCES


Author Contributions

Marco Orsini – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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