

Abdominal Aortic Aneurysm in a Patient with Claudication Pain

Case Report

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Abstract

Patients with abdominal aortic aneurysms may present with musculoskeletal pain. In approximately 7% to 8% of patients with low back pain, the cause is due to non-mechanical spinal conditions or visceral disease approximately half of diagnosed abdominal aortic aneurysms are detected clinically, these are usually >5 cm in diameter. Accidental discovery is common when plain film radiographs are taken for evaluation of back pain. Low Back pain and radiating pain to the legs are the most common symptoms encountered in routine clinical practice and usually originates from neurogenic causes including lumbar canal stenosis. The clinical symptoms are often confused with symptoms of peripheral neuropathy, musculoskeletal disease and vascular disease in elderly patients. We report a 70-year old male patient presented with low back pain and intermittent claudication pain for 2 years. Abdominal aortic Aneurysm was found on routine Ultrasound examination and underwent CT aortogram and a peripheral angiogram revealed chronic abdominal aortic aneurysm.

Keywords: Aneurysms; Claudication; CT Aortogram.

Introduction

Difficult challenging to recognize the symptoms found in clinical history that support the need for a screening abdominal exam. Patients that do have an abdominal aortic aneurysm can present in a different manner. These categories consist of patients without significant symptoms, patients with symptoms due to bulging abdominal aortic aneurysms [1]. Difficult to discern between a patient that has an abdominal aortic aneurysm and a patient that has another cause for the same complaint. Compared with non-inflammatory abdominal aortic aneurysms, 65% to 90% of patients with inflammatory abdominal aortic aneurysms are symptomatic [2]. Some of these patients do present as patients having typical musculoskeletal problems and/or abdominal pain [3]. Radiculopathy, presented as a claudication leg pain especially in elderly, is one of the most common clinical symptoms. In general, claudication leg pain, from neurogenic or vascular, can be distinguished based on following several criteria. In the neurogenic claudication group, typical findings are: discomfort on lifting, bending, coughing or sneezing, pain on standing, history of back injury, variable claudicating distance and segmental sensory

loss, slow recovery by rest. In the vascular claudication group, characteristic distinguishing features include: abnormal foot pulses, arterial bruits, relief of symptoms by standing, a constant claudicating distance and stocking sensory loss, quick recovery by rest [4]. Claudication by the peripheral vascular disease can be diagnosed simply and non-invasively via the Ankle Brachial Index (ABI) measurement [5]. We report a 70-year old male patient presented with low back pain and intermittent claudication pain for 2 years. Abdominal aortic Aneurysm was found on routine Ultrasound examination and underwent CT aortogram and a peripheral angiogram revealed chronic abdominal aortic aneurysm and diffusely diseased popliteal and dorsalis pedis artery, improved with a conservative line of management.

Case Presentation

We report a 70-year old male patient presented with low back pain and intermittent claudication pain for 2 years without a history of neurological deficits. On examination, prominent epigastric pulsations were with absent popliteal and dorsalis pedis pulse in the bilateral lower limb. Routine investigations were normal

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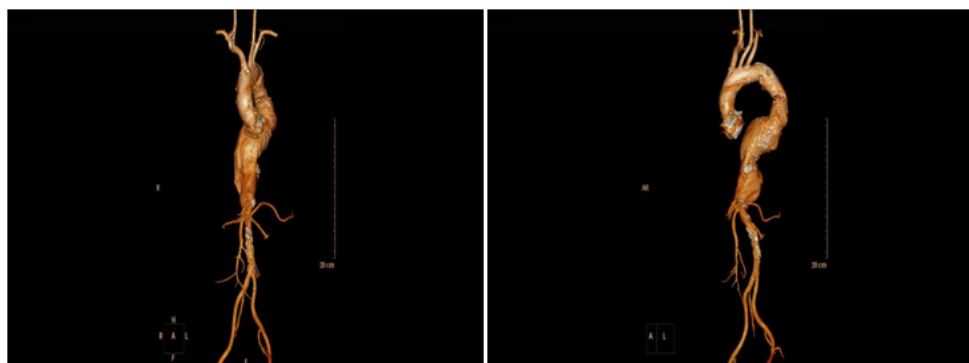
with normal serology and profile for connective tissue diseases. The ECG done was showed normal sinus rhythm. The Chest X-Ray was normal. Echocardiography showed the size of the cardiac chambers with a preserved ejection fraction. A screening abdominal ultrasound examination showed an abdominal aortic Aneurysm. Confirmation and sizing of an aneurysm was done using a computed tomographic (CT) examination of the abdomen with angiographic delineation of the aneurysm. There was marked fusiform dilation of the descending thoracic aorta and suprarenal abdominal aorta. The Maximum dimensions in descending thoracic aorta measured 57.5x66mm and abdominal aorta measured 82x94mm with extensive mural thrombus and calcification [Figure 1A & 1B].

Discussion

An abdominal aortic aneurysm is an unusual cause of low back pain and claudication pain, compared with the frequency of mechanical low back pain. An abdominal aortic aneurysm is uncommon before 50 years of age and is asymptomatic in 66% to

75% of cases [6]. When there are signs, the classic complaints are back ache and abdominal pain. It is important to know the signs and symptoms and the risk factors [7]. Age, sex, smoking, and family history are the most significant abdominal aortic aneurysms risk factors [8]. The majority of those diagnosed with abdominal aortic aneurysms are 65 years and elderly. An abdominal aortic aneurysm is 5 to 10 times more common in men than in women [9]. A history of smoking, defined as a consumption of more than 100 cigarettes in a lifetime, is a significant risk factor. Cessation of smoking is the only modifiable factor associated with abdominal aortic aneurysms expansion. First-degree family members of a known aneurysm patient, male relatives, in particular, are also at increased risk [10]. Elective surgical repair of the abdominal aortic aneurysm has associated risks. Operative mortality rates vary from 1.4% to 5.8%, with a complication rate of 32.4%. Therefore, aneurysms are not repaired until they are at least 43 mm some studies even mention diameters of larger than 50 to 55 mm. Mortality is seen in patients with associated morbidity and those awaiting surgical repair for abdominal aortic aneurysm [11]. Patient was advised surgical management but patient and their

Figure 1A & 1B. CT aortogram and peripheral angiogram showed Marked fusiform dilation of descending thoracic aorta and suprarenal abdominal aorta Maximum dimensions in descending thoracic aorta measure-57.5x66mm and abdominal aorta maximum dimensions measures 82x94mm.



relatives did not give consent for surgery. Patient was managed conservatively.

Conclusion

The majority of individuals with abdominal aortic aneurysm are asymptomatic at the time of diagnosis. An abdominal aortic aneurysm has specific symptoms and associated risk factors. If known risk factors are present, a clinical examination needs to be carried out. It should be a differential diagnosis in every male patient older than 50 years with low back pain and claudication pain. In case of suspicion, the patient should be referred for advanced imaging.

References

- [1]. Cates JR. Abdominal aortic aneurysms: clinical diagnosis and management. *J Manipulative Physiol Ther.* 1997; 20(8):557-61. PMID: 9345685.
- [2]. Ahlawat SK, Cuddihy MT. 71-year-old woman with low back pain. *In Mayo Clinic Proceedings.* 2002 Aug 1; 77(8): 849-852.
- [3]. Crawford C. Abdominal aortic aneurysm presenting as low back pain: a case report. *Chiropractic Journal of Australia.* 2003; 33(3):83-8.
- [4]. McCulloch JA, Young PH. *Essentials of Spinal Microsurgery*, Philadelphia: Lippincott-Raven. 1998; 462-463.
- [5]. Hirsch AT, Criqui MH, Treat-Jacobson D, Regensteiner JG, Creager MA, Olin JW, et al. Peripheral arterial disease detection, awareness, and treatment in primary care. *JAMA.* 2001. 286:1317-1324. PMID: 11560536.
- [6]. Rubinstein S, Pfeifle CE, van Tulder MW, Assendelft WJ. Chiropractic patients in the Netherlands: a descriptive study. *J Manipulative Physiol Ther* 2000;23(8):557-63. PMID: 11050613.
- [7]. Dargin JM, Lowenstein RA. Ruptured abdominal aortic aneurysm presenting as painless testicular ecchymosis: the scrotal sign of Bryant revisited. *J Emerg Med.* 2011 Mar; 40(3):e45-8. PMID: 18614326.
- [8]. Fleming C, Whitlock EP, Beil TL, Lederle FA. Screening for abdominal aortic aneurysm: a best-evidence systematic review for the U.S. Preventive Services Task Force. *Ann Intern Med* 2005;142(3):203-11. PMID: 15684209.
- [9]. Patel SN, Kettner NW. Abdominal aortic aneurysm presenting as back pain to a chiropractic clinic: a case report. *J Manipulative Physiol Ther.* 2006; 29(5):409.e1-7. PMID: 16762671.
- [10]. Kuivaniemi H, Shibamura H, Arthur C, Berguer R, Cole CW, Juvonen T, et al. Familial abdominal aortic aneurysms: collection of 233 multiplex families. *J Vasc Surg.* 2003; 37(2):340-5. PMID: 12563204.
- [11]. Brady AR, Fowkes G, Greenhalgh RM, Powell JT, Ruckley CV, Thompson SG. Risk factors for postoperative death following elective surgical repair of abdominal aortic aneurysm: results from the UK Small Aneurysm Trial. *Br J Surg* 2000; 87(6):742-9. PMID: 10848851.