

CASE REPORT

Ilio-femoral aneurysm masquerading as an inguinal abscess

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Abstract

True isolated atherosclerotic aneurysms of the superficial femoral artery are rare. In this paper, we report a case of ilio-femoral aneurysmatic dilatation masquerading as an inguinal abscess in 40-year-old male. This interesting case was accidentally found during dissection of pelvic vessels, in the Department of Anatomy, Kasturba Medical College, Mangalore. After going through the history of the patient. We found that he had the history of swelling in both groins being drained 20 years back, and also the multiple heterosexual exposures. The swelling was pulsatile, tender, and soft to firm in consistency and measured 7×3 cm. All physical signs were suggestive of an abscess and he was treated conservatively by ampicillin, gentamycin, metronidazole, and anti-inflammatory drugs. Fine needle aspiration yielded only frank blood. Subsequently, general condition of the patient deteriorated and died due to hypovolemic shock. Autopsy revealed a ruptured fusiform aneurysm measuring 10×5 cm at the junction of right external iliac with the femoral arteries measuring 3 cm in diameter. This case is an example of difficulties in diagnosing the rare arterial aneurysm, thus leading to misdiagnosis as an inguinal abscess. When only the blood is drawn during fine needle aspiration, one should suspect the swelling as an aneurysmatic dilatation.

Keywords: aneurysm, superficial femoral artery, inguinal abscess.

Introduction

True isolated atherosclerotic aneurysms of the superficial femoral artery are relatively rare [1, 2], which occur at an older average age than other aneurysms [3, 4].

Many times these aneurysms rupture leading to a severe medical problem, and several such cases have been documented in the literature [5–7].

Since superficial femoral artery aneurysms are rare, there is a possibility of misdiagnosis of it as a soft tumor, because the latter appears as partially thrombosed aneurysm under conventional diagnostic methods [8].

We report a case of aneurysm appearing like the inguinal abscess and the anatomical basis of understanding of this clinical condition.

Material and methods

The identified cadaver was a 40-year-old male, while going through the case report we found that he was presented with a swelling in the right groin of four weeks duration.

The patient also complained of pain at this site as well as in the lower abdomen. History of swelling in both groins being drained 20 years back was obtained. He was treated 20 years ago for an inguinal abscess on the left side.

He also had a history of multiple heterosexual exposures. He was febrile and upon examination, the swelling was pulsatile, tender, and soft to firm in consistency and measured 7×3 cm.

Results

Laboratory investigations were as follows: haemoglobin 12.5%, TLC 13 000/mm³, DC-P 92, L 8, M 0, and E 0 and ESR was 110mm at the end of first hour. ELISA test for HIV was non-reactive, but the VDRL was positive. All physical signs were suggestive of an abscess.

The patient was treated conservatively with ampicillin, gentamycin, metronidazole, and anti-inflammatory drugs. As he showed no improvements and the size of the swelling increased, a fine needle aspiration from the lesion was done, which yields frank blood. The conservative management was continued. Subsequently, the general condition of the patient suddenly deteriorated and he died due to hypovolemic shock.

At autopsy a ruptured fusiform aneurysm measuring 10×5 cm involving right external iliac and femoral arteries was seen with a defect measuring 3 cm in diameter on its anterior surface (Figure 1).

There were large intra-pelvic blood clots in the rectovesical pouch and pararectal fossae with fibrosis involving urinary bladder and the adjacent muscles.



Figure 1 – Photograph showing the inguinal region of right side. The aneurysmatic swelling (white arrows) occurred at the junction of external iliac and femoral arteries. The swelling was burst from its ventral aspect

The luminal aspect of the aneurysm revealed numerous atherosclerotic plaques as well as thrombus filling the aneurismal sac.

The left external iliac and femoral arteries were normal. Section obtained from the affected area showed marked thinning of the media with fibrosis and loss of elastic fibers confirming that it was a case of ruptured aneurysm.

☞ Discussions

The atherosclerotic aneurysms of the superficial artery are rare. Moreover, aneurysmatic swellings of this artery pose difficulties in diagnosis unless the MRI is used. This difficulty is due to the fact soft tissue tumors may have the similar appearance [8].

In the present case, the aneurysm of the artery was even not suspected, thus leading to the rupture of the artery and consequently the death. It was possible to diagnose the disease only after the autopsy, which showed the enlarged superficial and external iliac arteries.

The attending clinicians diagnosed it as an inguinal abscess as he showed symptoms of an abscess, like fever, swelling and fitting edema. Besides, the reasons for such a misdiagnosis may also be due to his history of suffering from an inguinal abscess some years ago. Misdiagnosis of this aneurysm has been recorded from various parts of the world.

In some instances, it was diagnosed as thrombophlebitis [7], or soft tissue tumor [8], or an inguinal abscess as in this case. Since he has been suspected for suffering from an abscess, the surgical requirements were not met and his death due to hypovolemic shock was due to the rupture of the artery. Thus, the anatomical study in the cadaver diagnosed the superficial femoral arterial aneurysm.

It is necessary to diagnose this aneurysm properly, because the surgical incisions might break open the dilated artery and consequently leading to uncontrolled bleeding and death.

When there is lack of response for symptomatic treatments, and also when fine needle aspirations bring only blood, the surgeons should suspect the abscess like swellings may be as the dilated atherosclerotic arteries and techniques like magnetic resonance imaging would definitely diagnose the same. It is also important that any gradual swellings in the inguinal region need not be an abscess, which unfortunately may be an aneurysmatic dilatation also.

References

- [1] VAZQUEZ G., ZAMBONI P., BUCCOLIERO F., ORTOLANI M., BERTA R., LIBONI A., *Isolated true atherosclerotic aneurysms of the superficial femoral artery. Case report and literature review*, J Cardiovasc Surg (Torino), 1993, 34(6):511–512.
- [2] WATANABE M., KOMURO H., NIITSU M., MATOBA K., ITAI Y., KANEKO M., *Aneurysm of the superficial femoral artery in an infant*, *Pediatr Radiol*, 2003, 33(4):278–280.
- [3] RIGDON E. E., MONAJEM N., *Aneurysms of the superficial femoral artery. A report of two cases and review of the literature*, J Vasc Surg, 1992, 16(5):790–793.
- [4] TAKAGI H., MIZUNO Y., MATSUTOMO M., MATSUNO Y., UMEDA Y., FUKUMOTO Y., SHIMOKAWA K., MORI Y., *Aneurysm of the femoral artery occupationally exposed to a vibratory tool for more than 10 years*, J Vasc Surg, 2004, 39(5):1125–1127.
- [5] PARRA H. H., BARK T., SWEDENBORG J., *Ruptured atherosclerotic aneurysm of the superficial femoral artery. Case report*, Acta Chir Scand, 1989, 155(9):493–494.
- [6] BONELLI U., CERRUTI R., ARNUZZO L., *Aneurysms of the superficial femoral artery at the rupture stage. Apropos 2 personal cases*, Minerva Chir, 1991, 46(19):1071–1073.
- [7] COPPIN T., LEBRUN E., BARROY J. P., *Rupture of infected superficial femoral artery aneurysm. A case report*, Acta Chir Belg, 2002, 102(4):276–278.
- [8] DOBRITZ M., LANG W., FELLNER F. A., *MR diagnosis of superficial femoral artery aneurysm primarily misdiagnosed as soft tissue tumor. A case report*, Magn Reson Imaging, 2003, 21(6):687–690.

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