Short Report

Not Just a Popliteal Aneurysm: A Case of Metastatic Epithelioid Angiosarcoma

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ARTICLE INFO

Article history:
Received 22 December 2011
Accepted 4 March 2012

Keywords:
Metastatic
Epithelioid angiosarcoma
Popliteal
Aneurysm
Neoplasm

ABSTRACT

Introduction: Popliteal aneurysms are the second most common aneurysm. This case report describes a case of angiosarcoma in a popliteal aneurysm, illustrating the importance of post-operative surveillance in expanding popliteal aneurysms post-treatment.

Report: A 79-year-old male presented with an enlarging mass in the left popliteal fossa, 18 months post-ligation and bypass for a left popliteal aneurysm. The case proved to be metastatic epithelioid angiosarcoma, arising in the left popliteal fossa.

Discussion: Epithelioid angiosarcomas are rare, aggressive vascular neoplasms. An awareness of these lesions during surveillance of patients with expanding popliteal aneurysms post-treatment, would allow for earlier diagnosis and more timely interventions.

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Introduction

Popliteal aneurysms are the second most common aneurysm after abdominal aortic aneurysms. Occasionally the aneurysmal sac continues to expand after repair. This is generally considered a benign process, requiring surgical intervention only when symptomatic. This case report of a malignant process masquerading as residual aneurysmal sac illustrates the importance of post-operative surveillance in expanding popliteal aneurysms post-treatment.

Report

A 79-year-old male presented to the Surgical Clinic at a small rural hospital with an enlarging mass in the left popliteal fossa, 18 months post-ligation and bypass for a suspected 1.7 cm left popliteal aneurysm found on ultrasound at a tertiary centre.

Past surgical history included an open repair of a 7 cm infrarenal abdominal aortic aneurysm in 2006. Past medical history included ischaemic heart disease, hypercholesterolaemia, hypertension, chronic obstructive pulmonary disease and benign prostatic hypertrophy. He was a current smoker of 15 cigarettes per day. His medications were atenolol, aspirin and simvastatin.

On physical examination there was a firm, ill-defined lump, approximately 5–6 cm in diameter in the left popliteal fossa. There was also a prominent lymph node in the left inguinal region. No adjacent skin lesions were noted.

Laboratory investigations revealed a thrombocytosis (platelets: 811 x 10^9/L; normal range, 140–400 x 10^9/L) with normal coagulation profile. Biochemistry was normal apart from mildly elevated alkaline phosphatase (141 U/L; normal range, 56–119 U/L) and gamma-glutamyl transferase enzymes (144 U/L; normal range, <55 U/L). Tumour markers for carcinoembryonic Ag, CA 19.9 and ePSA were normal.

The provisional diagnosis was an enlarging residual aneurysmal sac in the left popliteal fossa and the lymph node was initially considered to be unrelated.

Fine needle aspirate of the left inguinal node yielded malignant cells. Further excision biopsy of the node was unable to provide further information other than “undifferentiated carcinoma”.

Computed tomography (CT) of the left leg revealed a septated enhancing mass in the left popliteal fossa, measuring 5.5 cm x 4.5 cm (Fig. 1). Left inguinal lymphadenopathy and involvement of the left external iliac lymph nodes was evident. Core biopsy of the mass in the left popliteal fossa was performed and revealed primary epithelioid angiosarcoma (Fig. 2).

Follow-up staging CT of the chest, abdomen and pelvis revealed extensive nodal and lung metastases. The patient chose not to undergo palliative chemotherapy and passed away two months later.

Discussion

Epithelioid angiosarcomas are rare, aggressive vascular neoplasms most commonly found in the thyroid gland, skin,
adrenal glands, bone, and in the deep soft tissues of the extremities. They invade locally and readily metastasise giving patients currently only a 10–15% 5-year survival rate.

In a significant proportion of popliteal aneurysms the residual aneurysmal sac continues to enlarge post-ligation and bypass. This is thought to be secondary to ‘backbleeding’ from geniculate branches. The possibility of pre-existing low-grade angiosarcoma has not been considered previously in a popliteal aneurysm that had continued to expand post-treatment.

An extensive literature search of Ovid MEDLINE® & PubMed® revealed several cases of metastatic epithelioid angiosarcomas arising from the extremities. There have been no previously reported cases of epithelioid angiosarcomas arising from within suspected popliteal aneurysms.

In conclusion, epithelioid angiosarcoma is a rare, aggressive vascular neoplasm. An awareness of these lesions as well as continued surveillance of patients with expanding popliteal aneurysms post-treatment, would allow for earlier diagnosis and more time to consider radiotherapy and chemotherapeutic interventions.

Conflict of Interest/Funding

None.
References