**CASE REPORT**

**True Aneurysm of the Inferior Gluteal Artery: Case Report and Review of the Literature**

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**Introduction**

Aneurysms of the gluteal arteries are rare, the majority are pseudoaneurysms secondary to trauma. True aneurysms of the gluteal arteries are due to atherosclerosis, infections or polyarteritis nodosa. We report a case of a true inferior gluteal artery aneurysm managed by a one-stage extrapelvic approach.

**Case Report**

A 76-year-old woman presented with a painful swelling in the left buttock and upper thigh which had gradually enlarged and become uncomfortable. She had no history of trauma, infection or peripheral vascular disease. On examination, she was hypertensive with a blood pressure of 190/90 mmHg. There was a large tender swelling in the left buttock and upper third of the thigh, measuring 15 cm by 35 cm. The diagnosis of an inferior gluteal artery aneurysm was made and confirmed by ultrasound scan and computerised tomography (Fig. 1). Arteriography confirmed an inferior gluteal artery aneurysm, which did not contribute to the distal limb circulation.

The patient was placed in the left lateral position and surgery performed via a left posterior approach through the buttock and upper thigh. The gluteus maximus muscle was divided to expose a 6 cm inferior gluteal artery aneurysm, the sciatic nerve was identified and preserved. The aneurysm was controlled and clamped with no reduction of foot perfusion observed. The aneurysm was ligated, back-bleeding vessels were underrun and the wound was drained and closed. Postoperatively, she recovered quickly and went home 7 days later.

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Table 1. Literature relating to true gluteal artery aneurysms.

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Number of cases</th>
<th>Aetiology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gostigian and Schlitt</td>
<td>1963</td>
<td>1</td>
<td>Polyarteritis nodosa</td>
</tr>
<tr>
<td>Meek and Hill</td>
<td>1968</td>
<td>3</td>
<td>2 mycotic (1 syphilitic, 1 streptococcal)</td>
</tr>
<tr>
<td>Scotti</td>
<td>1980</td>
<td>1</td>
<td>Possible mycotic origin</td>
</tr>
<tr>
<td>Grand</td>
<td>1992</td>
<td>1</td>
<td>Mycotic</td>
</tr>
<tr>
<td>Schorn</td>
<td>1995</td>
<td>1</td>
<td>Atherosclerosis</td>
</tr>
</tbody>
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**Discussion**

The majority of gluteal artery aneurysms are pseudo-aneurysms secondary to trauma, pelvic fractures or iatrogenic causes. They present with a painful, sometimes pulsatile, swelling in the buttock, there may be a bruise and signs of inflammation, or symptoms of sciatic nerve compression. They may mimic a buttock abscess with disastrous results. True gluteal artery aneurysms are rare. Their aetiology is secondary to atherosclerosis, infection and polyarteritis nodosa (Table 1).

Diagnostic investigations used include ultrasound, computed tomography, magnetic resonance imaging and arteriography. Arteriography is particularly valuable in demonstrating the anatomy and excluding the diagnosis of a persistent sciatic artery (PSA) aneurysm. A PSA is a rare developmental abnormality representing the original embryological axial limb vessel. When present, the PSA provides the main blood supply to the lower limb; thus a PSA aneurysm must be treated with reconstruction to maintain lower limb bloodflow.

Traditionally, the approach to gluteal artery aneurysms is in two stages. A transperitoneal or retroperitoneal approach to gain proximal control of the internal iliac artery and a buttock approach to the aneurysm itself. Interventional radiological techniques have been used to try to reduce surgical morbidity associated with the surgical approach to the internal iliac artery. These have included coil embolisation and balloon occlusion of the aneurysm. Similar techniques have been used in the control of acute bleeding, and in definitive treatment. The two-stage approach should be used in the treatment of pseudoaneurysms, ruptured aneurysms or aneurysms involving the artery before its exit from the sciatic foramen. True gluteal artery aneurysms that are solely extrapelvic can be managed from the buttock alone, as demonstrated by this case.

Internal iliac artery ligation alone should not be recommended because backfilling can occur due to the extensive collateral blood supply in the gluteal area. Most cases present with symptoms related to aneurysm size and pressure effects, consequently surgical treatment and aneurysmectomy is the treatment of choice. In all cases, care must be taken to avoid damage to the sciatic nerve, which is often adherent to the aneurysm sac.

**References**


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