Introduction

A persistent sciatic artery (PSA) is a rare anomalous continuation of the internal iliac artery to popliteal and tibial vessels. It affects, approximately, 0.025%-0.05% of population. Angiographic studies have shown a 22% rate of bilateral PSA. This anomalous artery tends to have aneurysmal change in up to 46% of cases, leading to distal embolic occlusion, sciatic neuropathy, pulsatile mass in the buttock and ruptured aneurysm.

Case report

We present the case of a 52-year-old female who had suffered from sciatica and rest pain in her right leg. Pain in her right buttock was aggravated by sitting for several years. She had sudden severe intermittent claudication for 4 days prior to visiting our vascular clinic. The computed tomographic angiography (CTA) showed a right PSA with a 1.87 cm aneurysmal change posterior to the femoral head with partial embolic occlusion of the right popliteal artery (Figure 1). The management of this patient included a combined surgical bypass from the right common femoral artery to the distal PSA via the intercompartmental route of the right thigh with a reverse right great saphenous vein graft and retrograde embolization of the proximal PSA through the proximal stump using a 14 mm Amplatz vascular plug II (Figure 2). Postoperatively, the patient was symptom-free from sciatica and rest pain, particularly when sitting on her right buttock. Her ankle-brachial index score returned to normal.

At the 1year follow-up, the CTA showed a good blood flow to the distal vessels of the right leg with thrombosis of the PSA aneurysm.

Conclusion

To avoid the abdominal or buttock surgical approach for proximal ligation of the PSA aneurysm, a combination of minimally-invasive bypass surgery with retrograde embolization is an alternative effective procedure in treating PSA aneurysm, which achieves a good bypass graft patency.