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Acute Leg Ischaemia in a Child due to a Thrombosed Popliteal Aneurysm

Ashwin Sivaharan, Tarek Elsaid, Gerard Stansby

Introduction: The case of an idiopathic thrombosed popliteal aneurysm is described in an otherwise healthy 6 year old child. This is the fourth reported case and the second youngest patient to present with an idiopathic isolated popliteal aneurysm.

Report: A 6 year old boy presented with an acutely ischaemic right foot. Computed tomography angiography confirmed a thrombosed popliteal aneurysm. A femoropopliteal bypass was performed with reversed long saphenous vein and ligation of the aneurysm. Yearly follow up is ongoing with ultrasound surveillance; the child's growth and development is unaffected, and the graft is patent. There was a readmission over six years later with claudication on the right side. There was evidence of thrombus in the graft with associated distal embolisation, which was managed conservatively with anticoagulation.

Discussion: Given the rarity of such presentations in the paediatric population, there is minimal good quality data to guide treatment. There have been three previous cases of idiopathic popliteal aneurysms all managed with a reversed long saphenous vein femoropopliteal bypass with resection of the aneurysm. Management should be guided based on the clinical picture and should be undertaken in specialised tertiary centres if possible. Surgical intervention is the treatment of choice in patients with an ischaemic limb.

Spontaneous Isolated Common Iliac Artery Dissection Treated with Self-Expandable Stent in a 38-year-old Patient: A Case Report

Robert Novotny, Jaroslav Chlupac, Jan Beran, Libor Janousek, Jiri Fronck

Introduction: Isolated iliac artery dissection (ISIAD) without the involvement of the aorta is a rare medical condition.

Report: A case of a 38-year-old man with sudden onset of rest pain and paraesthesia on the right lower limb (RLL) is presented. Upon admission, the RLL was pulseless, with mild paraesthesia in the foot. The patient underwent computed tomography angiography, which revealed isolated common iliac artery (CIA) dissection followed by endovascular treatment (stenting) of the CIA dissection, with an instant therapeutic effect. Hospital stay was

uneventful. The patient was discharged on the third post-procedural day.

Discussion: Endovascular treatment of ISIAD is a viable treatment modality, with low periprocedural complications, mortality, and morbidity. Owing to its mini-invasiveness, it is a viable treatment modality.

Atypical Presentation of Critical Lower Limb Ischaemia Treated with Aortobifemoral Biosynthetic Prosthesis

Ali Elsayi, George A. Antoniou

A Rare Cause of Upper Limb Lymphoedema

Ana N.M.B.M. Pinho, Joana M.M. Ferreira, Alexandre F.L. Carneiro

This is the first case report of upper extremity lymphoedema caused by a thyroid tumour. An 87 year old female patient with grade 3 lymphoedema of the upper right extremity was admitted. The lymphoedema had developed over the course of two years. Investigation identified a thyroid tumour, which compressed the mediastinal structures at the right superior thoracic outlet, causing venous congestion, oedema, and lymphoedema. The patient underwent thyroidectomy which markedly improved the lymphatic oedema. Resolution of the compression mechanism was an effective treatment, despite the severity and chronicity of the initial presentation.

Rare Condition, Unusual Anatomy, Elegant Solution – an Uncommon Manifestation of Kawasaki Disease

Nuno H. Coelho, Paulo Barreto, Victor Martins, Clara Nogueira, Jacinta Campos, Andreia Coelho, Rita Augusto, Carolina Semião, Evelise Pinto, João Ribeiro, Alexandra Canedo

Introduction: Peripheral artery aneurysms are a rare manifestation of Kawasaki disease (KD), with an estimated incidence of approximately 2% of all KD patients. The case of a 14-year-old girl with past clinical history suggestive of KD is reported; she presented with an aneurysm located in the brachial part of a superficial brachioulnoradial artery, still with the genuine brachial artery in place (an anatomical variation with a reported incidence of 0.14–1.3% in general population). Relevant medical data were collected from the hospital database.

Report: This is a report of a case of a symptomatic superficial brachioulnoradial artery aneurysm, secondary to KD,

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treated with aneurysm exclusion and superficial brachioulnoradial to the genuine brachial artery transposition. Uneventful intra- and postoperative course with symptom resolution is reported.

Discussion: The coexistence of a rare manifestation of KD (peripheral aneurysm) with an even rarer brachial artery variation allowed a simple but elegant solution, making this a unique case.

Repeat Rupture of a Giant Abdominal Aortic Aneurysm after EVAR

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Introduction: Ruptured abdominal aortic aneurysms (AAAs) are known to be associated with high fatal outcomes. Giant AAAs are often defined as having a maximum diameter over 13 cm. Large AAAs over 8 cm have demonstrated a yearly rupture rate of 30–50%, which explains the rarity of giant AAAs. Endovascular repair of ruptured AAAs (rAAAs) is increasingly advocated because of the shorter hospital stay and fewer post-operative complications. Nonetheless, outcomes regarding mortality and cost-effectiveness show a large variability and long-term outcomes are lacking. Few data have been published on treatment of giant AAAs and rAAAs; however, open surgery is generally the preferred option.

Report: An 83 year old presented to the Emergency Department with a history of ruptured abdominal aortic aneurysm treated with an aorto-uni-iliac endograft and a femorofemoral crossover bypass. During follow up, this was complicated by a symptomatic type III endoleak, which was treated by endovascular repair. During the current admission, he presented with a re-rupture of his former aneurysm, which now was 18 cm diameter because of a type IA endoleak. Open surgical repair was performed and the post-operative course was without complications.

Discussion: The current case underlines the value of vascular surgeons being able to perform both open and endovascular surgery in rAAA.

Giant, 20 cm Diameter, Ruptured Abdominal Aortic Aneurysm: A Case Report

Cathelijne Duijzer, Thomas C. Schuurs, Willem Wisselink

Introduction: The rupture risk of abdominal aortic aneurysms (AAAs) depends primarily on their diameter and increases exponentially with aneurysm growth. Therefore, giant AAAs, defined as > 13.0 cm in diameter, are rare clinical entities.

Report: A giant ruptured AAA that measured >20 cm in diameter was successfully treated by open repair.

Conclusion: It remains unclear why giant AAAs continue to grow to extreme size without rupturing. Open repair seems to be the treatment of choice for most giant aneurysms, both ruptured and unruptured.

Assessment of the Severity of Ischaemia and the Outcomes of Revascularisation in Peripheral Arterial Disease Patients Based on the Skin Microcirculatory Response to a Thermal Load Test

Yohei Yamamoto, Yoshinori Inoue, Kimihiro Igari, Takahiro Toyofuku, Toshifumi Kudo, Hiroyuki Uetake

Objective: This study investigated the skin microcirculatory response to a thermal load test using a laser Doppler flowmetry device to evaluate the severity of limb ischaemia and the outcomes of revascularisation in patients with peripheral arterial disease (PAD).

Methods: A total of 34 PAD patients (39 limbs) including 17 critical limb ischaemia (CLI) patients (21 limbs) who underwent revascularisation were enrolled. The skin microcirculation of the dorsal side of the affected foot was investigated for 15 minutes after local heating. The tests were performed both before and after revascularisation, and several parameters gleaned from the microcirculatory fluctuations were analysed and compared with the ankle brachial pressure index and the transcutaneous oxygen tension (tcPO₂) values.

Results: Among the parameters, significant differences were observed between the CLI patients and patients with claudication with regard to the increasing phase time (T_{inc}), the difference in the perfusion values at the onset and the peak of the transient increase in blood perfusion ($P\Delta$), the slope of the transient increase in blood perfusion (S_{in}), and the slope of the decrease in blood perfusion after the peak (S_{de}). In CLI patients, the $P\Delta$, S_{in} , and S_{de} values increased significantly after revascularisation. In the patients with claudication, the changes in the parameters after revascularisation were not statistically significant. The S_{de} showed the most statistically significant correlation with the tcPO₂ value ($\rho .759$, $p < .001$).

Conclusions: Thermal load testing can be used to evaluate the severity of limb ischaemia in patients with PAD.

Aortic Dissection Repair Using the STABILISE Technique Associated with Arch Procedures: Report of Two Cases

Alice Lopes, Ryan Gouveia Melo, Miguel L. Gomes, Pedro Garrido, Nádia Junqueira, Gonçalo Sobrinho, Ruy Fernandes e Fernandes, João Leitão, Ângelo Nobre, Luís M. Pedro

Introduction: The stent assisted balloon induced intimal disruption and relamination in aortic dissection repair (STABILISE) technique is being increasingly used for the treatment of complicated aortic dissections. However, as it is a fairly recent technique, the scientific information is limited.

Report: In this paper we report two cases of the STABILISE technique associated with procedures in the ascending aorta and supra-aortic trunks, consisting of a “frozen elephant trunk” procedure in one case and in the other, a carotid endarterectomy associated with reimplantation of the vertebral artery and partial arch debranching.

Discussion: In conclusion, while acknowledging the need for longer follow up and greater experience to support the safety and efficacy of this procedure, the two cases reported confirm that the STABILISE technique is a valid endovascular alternative in the treatment of complicated aortic dissections.

Trans-iliac Bypass for Critical Limb Ischaemia with Groin Necrosis: A Case Report

Youcef Lounes, Baris A. Ozdemir, Pierre Alric, Ludovic Canaud

Introduction: Infections at the level of the groin involving native or prosthetic vessels are typically bypassed using the obturator canal. However, extensive wounds or infections, particularly those involving the medial compartment of the thigh, can preclude this approach.

Report: A 66 year old male with diabetes mellitus presented after several previous revascularisations of the femoral artery with extensive necrosis of the groin and critical limb ischaemia with necrotic changes in the toes. An iliopopliteal bypass through the iliac wing was planned because of the extent of the infection.

Discussion: The post-operative course was uneventful with complete resolution of tissue loss at one year follow up.

Late Pseudoaneurysm After Access Site Closure with Manta in Transfemoral Aortic Valve Implantation

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Introduction: Access site vascular complications in transfemoral transcatheter aortic valve implantation (TF-TAVI) are still a major concern. Recently, a novel collagen plug based closure device (Manta) was introduced. The results from the first reports on Manta are very promising, but not much is known about the long-term patency.

Report: A case of late pseudoaneurysm after access site arterial closure with Manta in TF-TAVI is described. The patient presented five weeks after left sided TF-TAVI with pain and claudication like symptoms in the left leg. CT angiography revealed a pseudoaneurysm at the puncture

site. The patient was successfully treated by vascular surgery.

Discussion: The results from recent peri-operative reports on the Manta vascular closure device (VCD) are promising, but not much is known about the long-term patency. In the present report a patient is described who developed a pseudoaneurysm several weeks after access site closure with Manta. To the authors' knowledge, no such late access site complications after use of the Manta VCD have been reported previously.

Successful Management of a Type B Gutter Related Endoleak after Chimney EVAR by Coil Assisted Onyx Embolisation

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Introduction: The aim was to describe possible management of a persistent gutter related type Ia endoleak after treatment of a symptomatic pararenal aortic aneurysm with the chimney endovascular technique.

Report: A 77 year old man with a symptomatic 6 cm pararenal aortic aneurysm was referred. Computed tomography angiography (CTA) showed a pararenal aortic aneurysm with involvement of both renal arteries and extension up to the superior mesenteric artery. The patient underwent treatment by placement of triple chimney grafts and an abdominal stent graft. Completion angiography showed a gutter related type Ia endoleak. As the type Ia endoleak persisted at the three month CTA follow up and according to the PERICLES registry classification of endoleaks, a type B causative mechanism was detected. Embolization of the gutters was performed with coils and onyx, leading to complete resolution of the gutters on completion angiography. The 10 month post-operative magnetic resonance angiogram showed no further evidence of any endoleak and complete exclusion of the aneurysm.

Conclusion: Treatment of persistent type B gutter related endoleaks after triple chimney endovascular aneurysm repair can be performed with the placement of coils and adjunctive use of fluid agents.