

Abstracts from Issue 43 of EJVES Short Reports[☆]

Editor: Jean-Baptiste Ricco

Unique Presentation of an Inflammatory Abdominal Aortic Aneurysm With Rhabdomyolysis

Jeanette H. Man and Jun Xu

Objective: This study reports the case of a 72 year old male who presented with rhabdomyolysis and a symptomatic juxtarenal inflammatory abdominal aortic aneurysm (IAAA). He underwent open repair of his IAAA with a polytetrafluoroethylene graft using the transperitoneal approach.

Results: The patient's aneurysm had significant inflammation with a thick rind of friable tissue overlying the native aorta. He had no history of autoimmune disease to serve as a potential trigger of his symptomatic IAAA. Prior to his presentation, however, he did experience three months of myalgia, with a concomitant creatine kinase elevation to 20,000 U/L and gross haematuria.

Conclusion: It is proposed that rhabdomyolysis and its accompanying inflammatory state may serve as a trigger for IAAA.

Successful Endovascular Treatment of a Giant Intraparenchymal Renal Artery Pseudoaneurysm in a Young Female Patient

Floortje Huizing, Joris J. Blok, Thijs A.J. Urlings and Harm J. Smeets

Introduction: Pseudoaneurysms of the renal artery are fairly uncommon and mostly asymptomatic. They develop mostly in the right renal artery and in female patients.

Report: In this report, a female patient with an intraparenchymal renal artery pseudoaneurysm with one year follow up is described. She presented with non-specific abdominal pain. A computed tomography scan revealed hydronephrosis of the right kidney and a giant, intracapsular, contained rupture of a pseudoaneurysm of the right renal artery. The patient was admitted to hospital and underwent a successful selective embolisation of the pseudoaneurysm. Follow up at one year showed normal renal function and an excluded aneurysm.

Discussion: Although relatively uncommon, renal artery pseudoaneurysms should be considered in the work up of patients with colicky flank pain. As a treatment option, endovascular approaches are appealing because they are less invasive. Successful treatment can prevent resection of the affected kidney.

Hybrid treatment of symptomatic carotid disease

Christopher Lowe, George A. Antoniou and Aws Alfahad

Abstract: Hybrid treatment is a well reported technique for tandem carotid artery disease. Herein, we present a previously undescribed technique to facilitate safe passage of a guidewire via the inflow limb of the Pruitt-Inahara shunt in the proximal common carotid artery. This technique helps to obviate the risk of causing dissection or intimal damage during retrograde access and carotid stenting in hybrid carotid procedures.

Secondary Aorto-enteric Fistula and Type II Endoleak Five Years after Endovascular Abdominal Aortic Aneurysm Repair

Yojiro Koda, Hirohisa Murakami, Masato Yoshida, Hitoshi Matsuda and Nobuhiko Mukohara

Introduction: Secondary aorto-enteric fistula (AEF) after endovascular abdominal aortic aneurysm repair (EVAR) is a rare but potentially fatal disease. The aetiology and mechanisms are unclear. This study presents a patient who developed secondary AEF and type II endoleak five years after EVAR.

Case: A 73 year old man underwent successful EVAR with a bifurcated aortic stent graft for a 5.5 cm infrarenal abdominal aortic aneurysm. The aneurysm sac showed no change in size for three years, then shrank 20 mm to 3.5 cm by five years. After five years and eight months, the patient presented with fever and back pain. Enhanced CT demonstrated enlargement of the aneurysm sac, type II endoleak from the third and fourth right lumbar arteries, and air around the stent graft. An emergency operation was performed. The infected stent graft was removed by pushing up the stent graft to release the hooks from the wall of the aorta. A small fistula resembling a fish mouth measuring 1×1 cm was observed in the third part of the duodenum. The fistula was closed by direct suture, and in situ reconstruction was performed with an 18×9 mm standard polyethylene terephthalate graft. Culture of the explanted stent graft grew enterobacter. Intravenous antibiotic therapy was continued for six weeks and was stopped after confirming no recurrence of infection with computed tomography and laboratory testing. Two years later, there has been no recurrence of infection.

Conclusion: Long term surveillance is critical because AEF can occur even after initially successful EVAR.

[☆]Full articles available online at www.jvascsurg.org

1078-5884/

[http://dx.doi.org/10.1016/S1078-5884\(19\)30506-4](http://dx.doi.org/10.1016/S1078-5884(19)30506-4)

Successful Surgical Reconstruction of a Ruptured Brachial Artery Aneurysm in a Patient With Type 1 Neurofibromatosis

Kyra J. Degenaar, Britt Barvelink, Syert Nienhuis and Bernard H. Elsmann

Introduction: The vascular pathology of patients with type 1 neurofibromatosis (NF-1) is known. Aneurysms of the brachial artery in NF-1 patients are rare and surgical treatment remains a challenge.

Report: A patient known to have NF-1 presented with swelling of the left arm. Computed tomography angiography showed a ruptured aneurysm of the brachial artery. Operative reconstruction was performed using reversed saphenous vein.

Discussion: Up to now four cases had been published describing brachial aneurysms in NF-1 patients. This case describes the successful reconstruction of a ruptured brachial aneurysm, using a saphenous vein.

Spiral Vein Graft Technique for Popliteal Artery Aneurysms

Gustav Pedersen, Egil Gleditsch, Lydia Johnsen and Espen Gubberud

Introduction: In patients with popliteal artery aneurysm lacking a suitable vein for bypass, prosthetic graft, or endovascular stent graft are alternative treatment options. However, durability is limited. Construction of an autologous spiral vein graft has previously been used to replace infected aortic grafts and arteriovenous fistulas.

Technical summary: Five patients underwent surgery for popliteal arterial aneurysm with the spiral vein graft technique. Technical success was 100%. Operative technique and results are reported.

Conclusion: The spiral vein graft technique can be used for popliteal artery aneurysm with good short term results, avoiding use of prosthetic grafts.

Knee Implant Dislocation Leading to Major Amputation 13 Years Later

Salomé Kuntz, Anne Lejay, Renu Virmani and Nabil Chakfé

Introduction: Injury to the popliteal vessels during total knee replacement is rare but can lead to catastrophic outcomes.

Report: An 81 year old female presented with Rutherford IIb acute left limb ischaemia (ALI) 13 years after total knee replacement. The polyethylene insert in the knee implant had dislocated from the other components and had moved into the popliteal fossa, leading to popliteal artery compression. She underwent emergency multidisciplinary surgery including removal of the polyethylene component, thrombectomy, and popliteal artery stenting, but major amputation was required. The popliteal artery and the stent were removed and submitted to histological analysis. The

stent was well expanded but focal malapposition was observed.

Conclusion: Regular follow up is mandatory in order to anticipate malfunction of the prosthesis and avoid long term complications.

Acute Testicular Ischaemia Following Endovascular Aneurysm Repair on the Opposite Side to Intentional Internal Iliac Artery Occlusion

Nikolaos Kontopodis, Alexandros Kafetzakis, Androniki Kozana, Konstantinos Tzirakis, Ioannis Peteinarakis and Christos V. Ioannou

Introduction: Testicular ischaemia is a potential complication after endovascular aneurysm repair (EVAR), which has only rarely been reported in the literature. This is the report of a patient who presented with acute testicular ischaemia in the immediate post-EVAR period.

Report: A 65 year old patient underwent EVAR for an aortic and bilateral iliac aneurysms. During the procedure, the right internal iliac artery was intentionally occluded to facilitate treatment of the common iliac aneurysm; however, the left internal iliac artery was preserved. The procedure was uneventful. On the second post-operative day the patient gradually developed symptoms of acute left testicular ischaemia. Clinical and ultrasonographic findings constituted the bases of diagnosis and the patient received conservative treatment with gradual improvement. To the authors' knowledge, this is the ninth case of testicular ischaemia after endovascular aneurysm repair reported in the literature.

Conclusion: Testicular ischaemia, although rare, is a possible complication post-EVAR. Acute and chronic testicular damage found in association with an abdominal aortic aneurysm or its treatment has not been well studied in the literature and therefore may be under reported.

Complete Disruption of The Iliac Vessels During Spinal Surgery With Delayed Presentation

Mariana Moutinho, Luís Silvestre, Diogo Belo, Tony Soares and Luís Mendes Pedro

Introduction: The posterior approach to the lumbar spine is most commonly used to treat lumbar spine pathology. Vascular complications, although rare, have a high mortality rate. This is the report of an arterial lesion complicating a L5 hemilaminectomy and its surgical resolution. The need to remain vigilant for this condition, which requires prompt diagnosis and treatment, is emphasised.

Report: A 31 year old woman was admitted to the neurosurgery department with L5 right-sided sciatica and an associated radiculopathy, and paraesthesia of the first toe of the right foot. She had previously undergone surgical correction of a L4 – L5 lumbar disc herniation, as well as a left

oophorectomy and chemotherapy for ovarian neoplasia. A right L5 hemilaminectomy associated with right L5 – S1 foraminotomy and L5 – S1 discectomy was performed with the patient in the ventral position. The procedure was carried out without any apparent complications. In the first three post-operative days the patient complained persistently of orthostatic hypotension and a drop in haemoglobin was observed. Computed tomography angiography revealed what appeared to be a complete transection of the right common iliac artery and vein, with active haemorrhage, and a large pseudoaneurysm. Immediate surgery was carried out with reconstruction consisting of a 9 mm Dacron graft interposed in the right common iliac artery, as well as ligation of the right common iliac vein, which was not amenable to repair. The post-operative period was uneventful. The patient was discharged on day 13 with normal lower limb pulses and mild oedema of the right lower limb, controlled with elastic compression stockings.

Discussion: Iatrogenic injuries of the large abdominal vessels during spinal surgery is rare but serious. Close patient surveillance and remaining vigilant for these life threatening vascular lesions are crucial in the peri-operative period of spinal surgery.

Parallel Graft Technique in a Complex Aortic Aneurysm: The Value of Intra-operative Flexibility from The Original Operative Plan

Ricardo Castro-Ferreira, Paulo G. Dias, Sérgio M. Sampaio, José F. Teixeira and Armando C. Lobato

Introduction: The parallel grafting technique (PGT) is a valuable alternative to prefabricated branched or

fenestrated endovascular aortic repair. An often overlooked advantage of PGT is its unique adaptability to different anatomical challenges that might appear intra-operatively.

Report: A 72 year old male patient presented with a 60 mm thoracic aneurysm, 59 mm juxtarenal abdominal aortic aneurysm, and 32 mm common iliac aneurysm (CIAA). Thoracic endovascular aortic repair plus endovascular aortic repair with bilateral renal artery chimneys and CIAA exclusion applying the sandwich technique was proposed. Because of unfavourable angulation it was not possible to achieve selective left renal catheterisation via axillary access. Changing to a femoral approach allowed successful retrograde catheterisation. The procedure ended with a chimney for the right renal artery and a periscope for the left renal artery. The final angiogram showed no endoleaks and renal and hypogastric patency. The patient was discharged three days after the procedure and remains under ultrasound surveillance after 40 months because of a small type two endoleak.

Conclusion: When using a prefabricated branched device, the possibility of selectively catheterising a visceral branch often has no straightforward solution. However, parallel grafting is an extremely flexible technique, which was of paramount importance for the surgical outcome of the present case.

Pieces of a Puzzle: Anatomy and Parallel Grafts

Steven Maximus and Ross Milner