

MP-1 May Thurner Syndrome unique presentation with OCP consumption

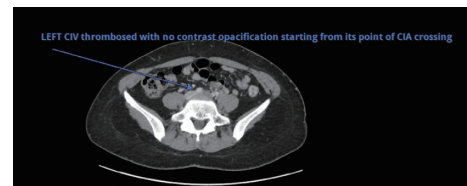
○Faiza Akhlaque, Faiza Akhlaque, Ahmed Farah, Mahmoud Hashish
King's College Hospital London Dubai

【What's_known?】

A lady with no known comorbidities after Oral contraceptive pills along with a history of prolonged immobilization because of long flight presented with thrombotic events diagnosed to have May Thurner Syndrome.

【What's_new?】

Every Patient who was planned for OCPS should be thoroughly investigated to avoid complications, and if the diagnosis of May Thurner Syndrome is made, minimal invasive treatment (stenting /Angioplasty) of the venous lesions release outflow obstruction and provides immediate relief of symptoms with good long term patency rates.



MP-2 Endovascular treatment for postoperative carotid artery occlusion after carotid endarterectomy

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【Case_overview】

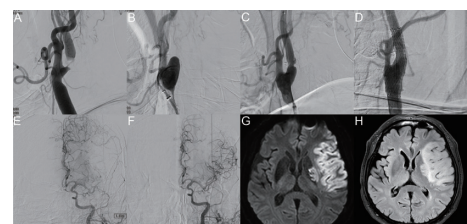
A 71-year-old man has been transferred to the stroke department due to left carotid artery stenosis. Acute carotid artery obstruction after undergoing the carotid endarterectomy (CEA) is a possibly fatal complication of this type of surgery. Acute carotid occlusion can occur due to the unstable plaque rupture with in-situ thrombosis, consequently distal embolization and compromise the cerebral flows leading to acute ischemic stroke in the immediate postoperative period or in the delayed period.

【Procedure_summary】

Complete endarterectomy was performed with a smooth distal edge. Around 24 hours after the endarterectomy, the patient developed right hemiplegia and global aphasia. Emergent computed tomography (CT) angiography showed complete occlusion of the left internal carotid artery (ICA) at just above the surgery site. The vascular surgeon planned emergency surgical re-exploration. After that, an endovascular thrombectomy was performed for left MCA occlusion. Additional carotid stent placement and balloon angioplasty was performed.

【Clinical_time_course_and_implication_(or_perspective)】

The patient made a clinically significant recovery within the admission period. Acute thrombosis and residual surgical flap at the endarterectomy site are major causes of acute or delayed ICA occlusion after CEA. Thus, rapidly making the clinical decision for surgical re-exploration is crucial. The best effort to revascularization through possible methods can be to prevent disastrous outcomes.



MP-3 Risk factors of periprocedural complications of carotid artery stenting - a multivariate analysis of a single-center experience

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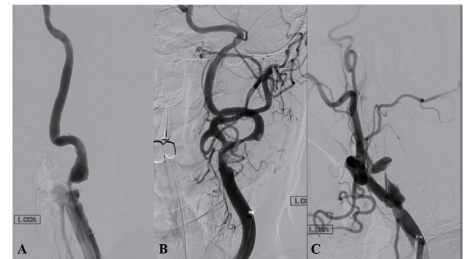
【What's_known?】

Carotid artery stenting (CAS) is currently performed as an alternative interventional treatment option to carotid endarterectomy. The aim of this study was to analyze our 10-year experience performing CAS. Secondly, we investigated to predict independent risk factors which determined periprocedural complications for interventional therapy.

【What's_new?】

Patients with carotid stenosis who underwent CAS with or without balloon angioplasty at our hospital from January 2012 to December 2021 were reviewed retrospectively. A total of 148 patients (64 women [43.2%]; median age, 73.0 [inter-quartile range, 65.5-79.0]) were analyzed. Complications occurred in 39 of 148 patients, most of which were minor and transient. The complication group showed high initial National Institutes of Health Stroke Scale, and a higher proportion of symptomatic stenosis and L-shaped proximal ICA than non-complication group. By multivariate analysis, L-shaped proximal ICA was independent risk factor of complications of CAS.

L-shaped proximal ICA was independently associated with high frequency of periprocedural complication of CAS, albeit minor and transient. In patients with L-shaped proximal ICA, if possible, it is better to consider CEA rather than CAS, and development of devices and techniques to overcome L-shaped proximal ICA will be necessary.



MP-4 A Study of the Usefulness of Stent Grafts (VIABAHN) in the Treatment of artificial vessel Shunt

○Ryo Yamamura, Reina Hori, Shota Tsurimoto, Takayasu Tada, Hiromasa Kato, Yoshihiro Noji, Masato Yamaguchi, Susumu Fujino

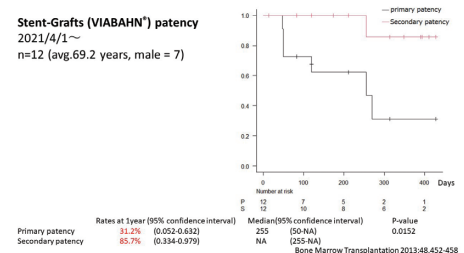
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【What's_known?】

In the treatment of artificial vessel (A-V) shunts, the inability to maintain long-term patency is a problem. The secondary patency rate is reported to be 30-40% at 5 years after surgery. The most problem is the occurrence of neointimal hyperplasia in the outflow tract veins. Our results before the use of stent grafts (VIABAHN) were poor compared to the general report, with a primary patency rate of 20.8% at 1 year and a secondary patency rate of 60.1% at 1 year.

【What's_new?】

We investigated the efficacy of a stent grafts implanted in the outflow tract vein. We treated twelve cases with stent grafts. The mean age was 69.2 years (n=12, male 7 patients). The primary patency rate at 1year was 31.2%, and the secondary patency rate at 1year was 85.7%. Stent grafts was able to improve primary ($\Delta +10.4\%$) and secondary ($\Delta +25.6\%$) patency rates at 1year. In some cases, long-term patency has been maintained, and we will report on the predictive factors.



MP-5 A case of Leriche syndrome in which different IVUS findings were confirmed in the same patient's bilateral iliac arteries

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【Case_overview】

A 67-year-old man was admitted to our hospital due to left leg pain and right intermittent claudication. His left ankle-brachial index (ABI) was 0.23, and right ABI was 0.27. 7 years ago, the computed tomographic angiography (CTA) revealed total occlusion of the right external iliac artery. But he left right intermittent claudication to treat hepatic cell carcinoma. This CTA showed total occlusion from the abdominal aorta inferior mesenteric artery bifurcation to the bilateral external iliac arteries.

【Procedure_summary】

We decided to perform endovascular treatment (EVT) for bilateral iliac artery occlusion. We used balloon guide catheters from bilateral femoral arteries. The passage of guide wire in left iliac lesion was relatively smooth, while in right iliac lesion was tough. IVUS was performed, there were lotus root-like appearance in left iliac artery, while fibrous lesion in right iliac artery. Balloon angioplasty with 3 mm diameter balloons was performed, and self-expandable 3 nitinol stents was implanted to bilateral iliac arteries. After stenting, 5 mm diameter balloons were advanced. Angiography showed a satisfactory result without complications.

【Clinical_time_course_and_implication_ (or_perspective)】

Postoperative ABI improved from 0.23 to 0.59 (left), from 0.27 to 0.66. His left leg pain and right intermittent claudication improved.

MP-6 Successful endovascular therapy for acute aortic occlusion in chronic phase: A case report

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【Case_overview】

The patient was an 80-year-old man who presented with weakness in both lower extremities and significantly elevated creatine kinase levels. Eight days after onset, contrast-enhanced computed tomography showed a three cm thrombotic occlusion of the infrarenal abdominal aorta, and a diagnosis of acute aortic occlusion was provided. Despite three months of conservative treatment, the ischemic limb wounds progressed, and we decided to perform EVT.

【Procedure_summary】

Guide sheaths were inserted from the left radial and right common femoral arteries to the abdominal aorta, respectively. Peripheral embolic protection was performed with occlusion by the balloon attached to the guide sheath in retrograde approach and the left renal artery was protected by jailed balloon technique. The lesion was treated with plain old balloon angioplasty followed by bare metal stent placement without any complication.

【Clinical_time_course_and_implication_ (or_perspective)】

After the treatment, wounds began to improve. Acute aortic occlusion is an uncommon vascular emergency which carries a high degree of morbidity and mortality. Thus, there are few reports of cases of chronic course of this disease and there are no official guidelines for this disease. In this case, we succeeded in endovascular treatment for aortic occlusion with paying close attention to thrombotic lesion.

MP-7 A case of complex lesions for which treatment could be performed in one session but selection of approach site was difficult

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【Case_overview】

The case was an 80-year-old man who had been experiencing claudication for three months. Contrast-enhanced CT revealed a long occlusion extending from the ostium of the left CIA to the proximal part of the left SFA and re-occlusion from the distal part of the left SFA to just above the left ATA bifurcation.

【Procedure_summary】

The left CFA and left PopA could not be selected as puncture sites. If approached from the right CFA, it would be difficult to fix the G.C. due to obstruction from the CIA ostium. Accordingly, we first attempted to perform EVT on the iliac lesion by approaching from the left radial artery. However, wire passage was unsuccessful. We next approached via the proximal part of the left SFA and succeeded in passing a wire through the occlusive lesion by means of a bidirectional approach. After that, we approached via the right CFA and performed EVT on the distal SFA lesion using a crossover approach.

【Clinical_time_course_and_implication_(or_perspective)】

Thus, we successfully performed EVT for these tandem lesions in one session. We report a case in which treatment of complex lesions was performed in one stage despite difficulty in selecting the approach site.

MP-8 A case of Acute Limb ischemia followed by Covid-19 infection

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【Case_overview】

Several reports showed the association between COVID-19 infection and acute limb ischemia due to thrombosis in limb arteries. A 68 years old male presented with acute onset of both limb pain. He was admitted to our hospital and computed tomography (CT) showed thromboembolism of bilateral external iliac artery (EIA), common and superficial femoral artery (CFA and SFA). He got infected with COVID-19 without any symptoms on examination with hospitalization. Because of COVID-19 infection, conservative medical treatment with anticoagulation and molnupiravir was performed for 7 days, and his limb necrosis was worsened.

【Procedure_summary】

Hybrid therapy with endovascular revascularization and surgical thrombectomy in both limb artery was performed 8 and 29 days later. 2 self-expandable bare nitinol stents were implanted in left EIA and right SFA respectively and a large quantity of clots were removed from left SFA and right EIA using Fogarty catheter.

【Clinical_time_course_and_implication_(or_perspective)】

After Recanalization, blood flow of both limb artery improved, and we were able to avoid major amputation.



MP-9 Percutaneous Fogarty catheter thrombectomy for intravenous intervention

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【Case_overview】

A 70-year-old male with left leg swelling and pain was hospitalized. Computed tomography showed thrombotic occlusion from the left common femoral vein (CFV) to the left common iliac vein (CIV) due to iliac compression, and we diagnosed May-Thurner syndrome.

【Procedure_summary】

Because of the poor response to anticoagulation therapy, we performed thrombolysis with a fountain catheter. Even after 2 days of urokinase use, massive thrombi remained, which were aspirated by 8-Fr guiding catheter. The left venous outflow was slightly improved. However, a third treatment was required for recurrent thrombotic occlusion from the left CFV. Intravascular ultrasound after thrombectomy and balloon dilatation revealed compression of the left CIV from the outside. Although a 12 mm stent was placed in the left CIV, massive thrombi still remained. Because of stent occlusion, percutaneous Fogarty catheter thrombectomy as a fourth treatment was performed using a large-bore sheath. Almost all thrombi were removed in several times procedures and we deployed two additional 12mm stents in the left external vein. Final venography revealed no residual thrombus and optimal flow to the inferior vena cava.

【Clinical_time_course_and_implication_(or_perspective)】

Percutaneous Fogarty catheter thrombectomy is one of the choices for reduction massive thrombus and optimal stenting is important for thrombotic occlusive lesion.

MP-10 Three year clinical outcomes of polymer coated paclitaxel eluting stents and drug coated balloons in patients with femoropopliteal artery disease

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【What's_known?】

The drug devices, such as polymer coated paclitaxel eluting stents (PC-PES) and drug coated balloon (DCB), have been widely used in current clinical settings for femoropopliteal (FP) artery lesions. However, the long term clinical performance of PC-PES and DCB in real clinical settings with complex lesions have not been studied sufficiently.

【What's_new?】

Multi-center registry data from 151 patients (65 and 86 treated with PC-PES and DCB, respectively) were retrospectively investigated. The mean lesion length was 174.7 ± 91.6 mm for patients treated with PC-PES and 126.9 ± 90.4 mm for patients treated with DCB ($p=0.002$). The incidence of chronic total occlusion was 61.5 and 29.1% in the PC-PES and DCB groups, respectively ($p<0.001$). Three-year primary patency (PP) and clinically driven target lesion revascularization (CD-TLR) were evaluated using Kaplan-Meier analysis. Three-year PP was 68.5 and 51.2% (log rank $p=0.057$) and freedom from CD-TLR was 82.4 and 79.0% in the PC-PES and DCB groups, respectively (log rank $p=0.82$).

MP-11 A rare case of an aortic arch stent causing central vein stenosis

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【Case_overview】

Introduction: Central vein stenosis is commonly encountered in end stage renal disease patients on hemodialysis. Most are manageable with repeated procedures and venoplasty, however in some cases, venoplasty may not be successful.

【Procedure_summary】

Method: We discuss a rare case of persistent upper limb swelling due to severe central vein stenosis from compression of an aortic arch stent.

【Clinical_time_course_and_implication_ (or_perspective)】

Result: Despite attempt at prolonged balloon inflation during venoplasty of the central vein, the stenosis still persisted. The arteriovenous fistula was then ligated and other forms of vascular access for hemodialysis were sought after.

Conclusion: Central venograms may be useful in end stage renal failure patients as part of pre-operative arteriovenous fistula creation so as to anticipate the possibility of central vein stenosis and its associated complications.

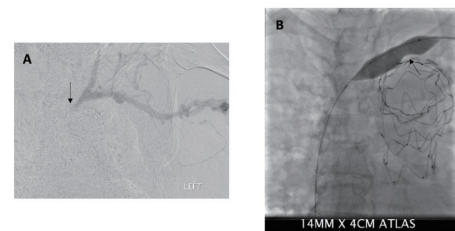


Figure A: Cut off seen at thoracic aortic stent graft. Figure B: Wasting of balloon across the central vein due to compression of the left brachiocephalic vein against the manubrium by the aortic arch graft stent.

MP-12 "Twist and pull" for stuck dialysis central venous catheter: case series in KCMH, THAILAND

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【Case_overview】

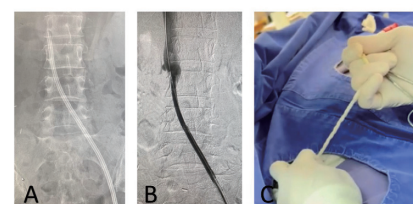
Tunneled central venous catheter (CVC) are used in patients who need long-term dialysis. To remove the catheter, the catheter is usually removed without difficulty after cuff-free from the subcutaneous tunnel. From 2015 to 2022, there are 5 cases of stuck catheters from total 650 catheter insertions in our unit. Four of 5 cases, the catheters were inserted more than 3 years. Endoluminal CVC dilatation was attempted in 3 cases: two successful and one failed. Last two stuck CVCs were successfully removed by "twist and pull" technique, including one with right jugular CVC insertion for 3 years and one with left femoral CVC insertion for 2.4 years.

【Procedure_summary】

As shown in Figure, the stuck CVC in the stenotic left iliac-IVC was attempted to removed by twist the CVC over the wire together with gentle pulling of the catheter. By twist the catheter, the screw mechanical advantage was created. The catheter was then easily pulled out from the central vein.

【Clinical_time_course_and_implication_ (or_perspective)】

There are several techniques to remove the stuck catheter. The twist and pull technique is one of the safely and highly effective way to removed stuck catheter.



A) Stuck CVC in left iliac and IVC. B) severe stenosis of left iliac vein and infrarenal IVC, and C) the stuck CVC was twist and pull over the wire under fluoroscopy

MP-13 A case of stent elongation due to stent failure in FP lesions

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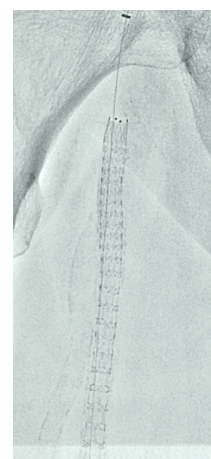
【Case_overview】

DES has established itself as a finalizing device for FP lesions. To achieve the high performance supported by the wealth of evidence, there are several precautions that operators should be aware of, one of which is deployment failure.

A 65-year-old man presented to our hospital with delayed wound healing of the right fifth toe. The right ABI was unmeasurable, and CTA showed occlusion of the right superficial femoral artery. A diagnosis of CLTI at clinical stage 3 (WII3f10) was made.

【Procedure_summary】

We inserted Parent Select through left CFA to right SFA, dilated right SFA with a 5.0 mm balloon after passing 0.014 GW. Then we started to deploy ELUVIA 7.0/120mm. The stent was only partially deployed in spite of the fact that the thumbwheel finished to be turned. The remaining part could be deployed by pulling out the shaft, but the part became elongated.



【Clinical_time_course_and_implication_(or_perspective)】

Five months later, angiography was performed due to delayed wound healing; the elongated stent had fragmented and right SFA had re-occluded. Both the use of 0.035 GW and the awareness of excessive thumbwheel resistance during deployment are important to avoid deployment failure and will lead to DES true performance.

MP-14 An unusual mechanism of a mid-SFV DVT arising after cyanoacrylate glue treatment for LSV incompetence

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【What's_known?】

With increasing sophistry of endovascular techniques, open surgery has largely been replaced by minimally-invasive methods. The VenaSeal closure system has been shown to be a safe and effective non-thermal, non-tumescent method to address truncal vein incompetence. A rare complication is that of DVT - typically described in the literature as arising from glue extension into the SFJ during the initial phase of glue administration.

【What's_new?】

We report the case of a 46-year-old female who underwent bilateral LSV ablation using VenaSeal for varicose veins. Pre-procedure US demonstrated reflux in the right LSV (max diameter 4mm) from SFJ to above-ankle, with a 2mm mid-thigh perforator 32cm from groin. She underwent an uneventful procedure but represented 1 week later with painful right leg swelling. US showed complete thrombosis of the mid-SFV while the proximal SFV, SPJ, SFJ and CFV remained patent. The LSV was non-compressible. Her symptoms improved after initiating rivaroxaban. We postulate that the DVT may have been a result of the cyanoacrylate glue inadvertently traversing the mid-thigh perforator. While exceedingly rare, caution should be exercised in performing glue embolisation in this subgroup of patients, for whom a potential contraindication for this treatment may exist, and underscores the importance of careful patient selection.

MP-15 A Case of Iatrogenic Subclavian Artery Injury Successfully Treated with Endovascular Treatment with a Stent Graft

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[Case_overview]

A 74-year-old woman was on maintenance dialysis for end-stage renal disease and was referred to our hospital for shunt reconstruction for arteriovenous shunt failure. While a blood access catheter was inserted through the right internal jugular vein with ultrasound-guided, the right subclavian artery was accidentally miss-punctured. Her right neck became swollen and painful gradually and an ultrasound and contrast-enhanced computed tomography (CT) revealed a pseudoaneurysm in the right subclavian artery. After a discussion of the treatment plan among multidisciplinary departments, we decided to treat with endovascular procedures.

[Procedure_summary]

We performed angiography and endovascular treatment (EVT) via the left femoral artery. After the intravascular ultrasound study, a 10-mm diameter VIABHAN stent graft was implanted in the right subclavian artery. Post-implantation angiography confirmed that blood flow to the pseudoaneurysm had disappeared.

[Clinical_time_course_and_implication_(or_perspective)]

After the procedure, her neck pain improved and swelling gradually decreased. The patient was administrated with no antithrombotic drugs.

After 3 months of EVT, contrast-enhanced CT showed no endo-leakage and the disappearance of pseudoaneurysm.

The use of stent grafts for vascular injuries is not a frequently experienced but a useful treatment strategy in emergency situations, we report this case.



MP-16 Where to put sheath in when ipsilateral or contralateral CFA is not possible

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Vajira hospital

[Case_overview]

63-year old man underwent femorofemoral bypass, right CFA endarterectomy, stenting of right external iliac artery and distal SFA and thrombolysis in 3 operations before. He had acute right leg pain and gangrene of right big toe for 1 month. CTA showed thrombosed right SFA to popliteal artery and chronic occlusion of left iliac artery and bypass graft.

[Procedure_summary]

Mid SFA was punctured retrogradely into thrombus. Small pieces of thrombus was aspirated. Thrombolysis failed. SFA was opened with 4mm balloon. Antegrade puncture of CFA was done but fail to forward the sheath due to thigh scar from previous operation. Sheath was inserted in SFA. Wire couldn't passed though distal SFA. PTA was retrogradely puncture. With using all possible re-entry technique, Command-18 from foot was snared in Vertebral catheter from SFA. Five-mm balloon was inflated along SFA. Stent was placed at re-entry site. Puncture site at SFA was manually compressed. Punctured at mid SFA was occluded by balloon.

[Clinical_time_course_and_implication_(or_perspective)]

PTA pulse was strong. Stump of amputated big toe was healed.

