KEY OPINION LEADERS (KOL) FORUM 2

Vascular Access 28 November 2023

Compiled by Flavia Gentile, Vascular Access Pathway Lead

Cases submitted by Nasr Alzakari & provided by Flavia Gentile

CASE 1

- 58 year's old male .know DM HTN And ESRD 10 Years ago .
- Patient came with rt Brachiocephalic fistula with hx of previous Central vein temporal catheter.
- Pt complain of swelling over rt upper arm and chest with increased with dialysis.
- By examining pt with dilited vein over chest and arm and decrease thril and increased pulse.
- Patient duplex show Central vein severe stenosis and no anastomosis stenosis.
- Disseciusion about medical treatment or endovascular treatment and if filed medical treatment from where we access the radial artery or transvenous antegrad or retrograde from femoral vein .
- Treatment of patient was done by endovascular through Access and central vein severe stenosis was crossing and gradually balloon diloton was done.
- Followup patein relive of swelling and good thril over all cephalic vein .
- Conclusion as possible as can we should limit used Central vein catheter specialty in subclavian vein and we shoud take care in examination before doing access to correct any problems before doing access.
- Question what the best of failed endovascular correction of central vein we should do Axiil axillary bypass if contra patents if occluded we do axilifemoral bypass.and last option ligation acesee

Case submitted by: Nasr Alzakari


central Vene stenosis before dilati
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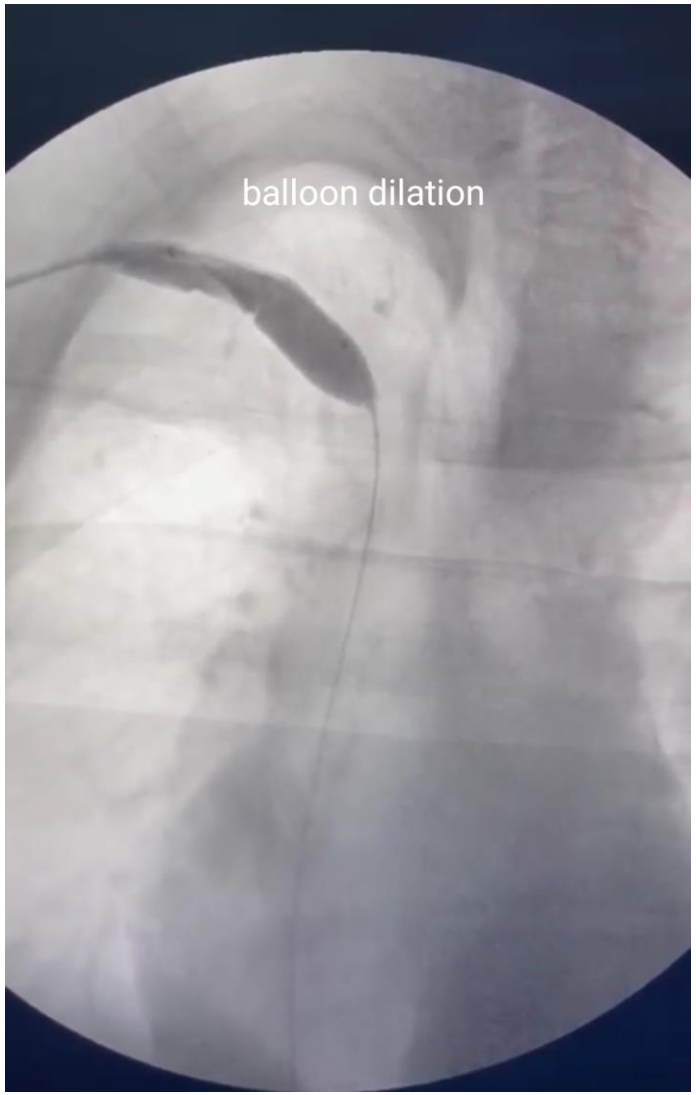
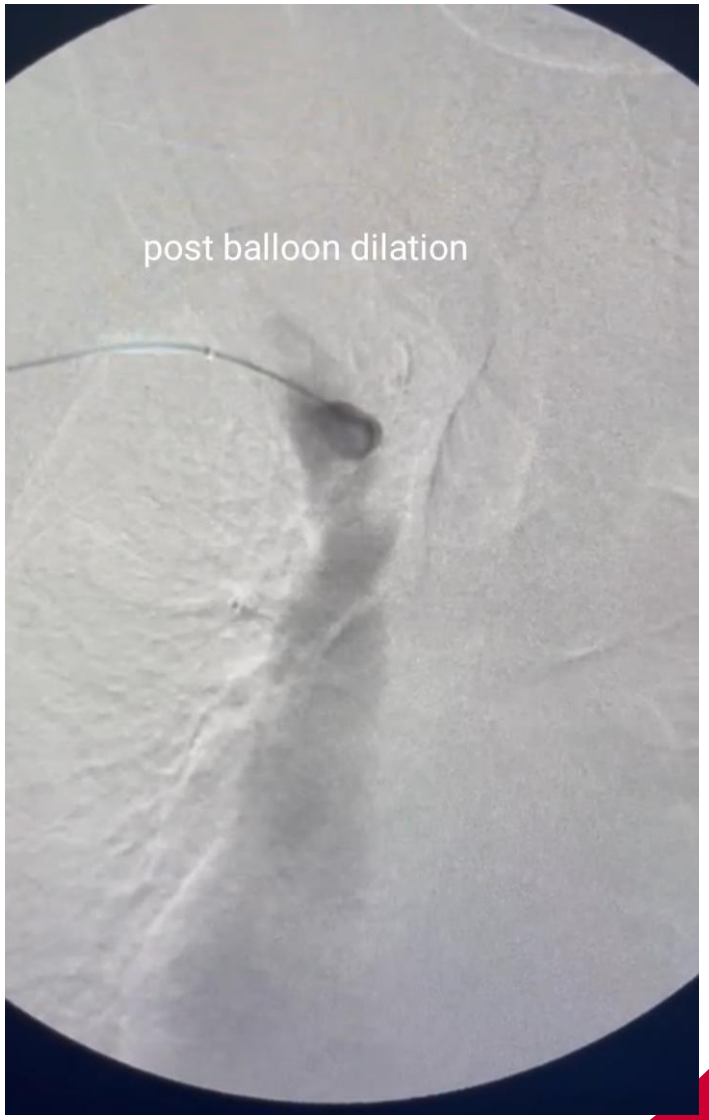

balloon dilation


post balloon dilation

CASE 2

- 49 years old ESRD with rt venous HTN due to central vein occlusion.

- Pt underwent venoplasty balloon dilation of Central vein under local anesthesia the access through the fistula and discharge after 6 hours patient decrease the swelling and the dialysis through it better. The image below before and after balloon dilation without need stent

Case submitted by: Nasr Alzakari

CASE 3

63 yo man obese,

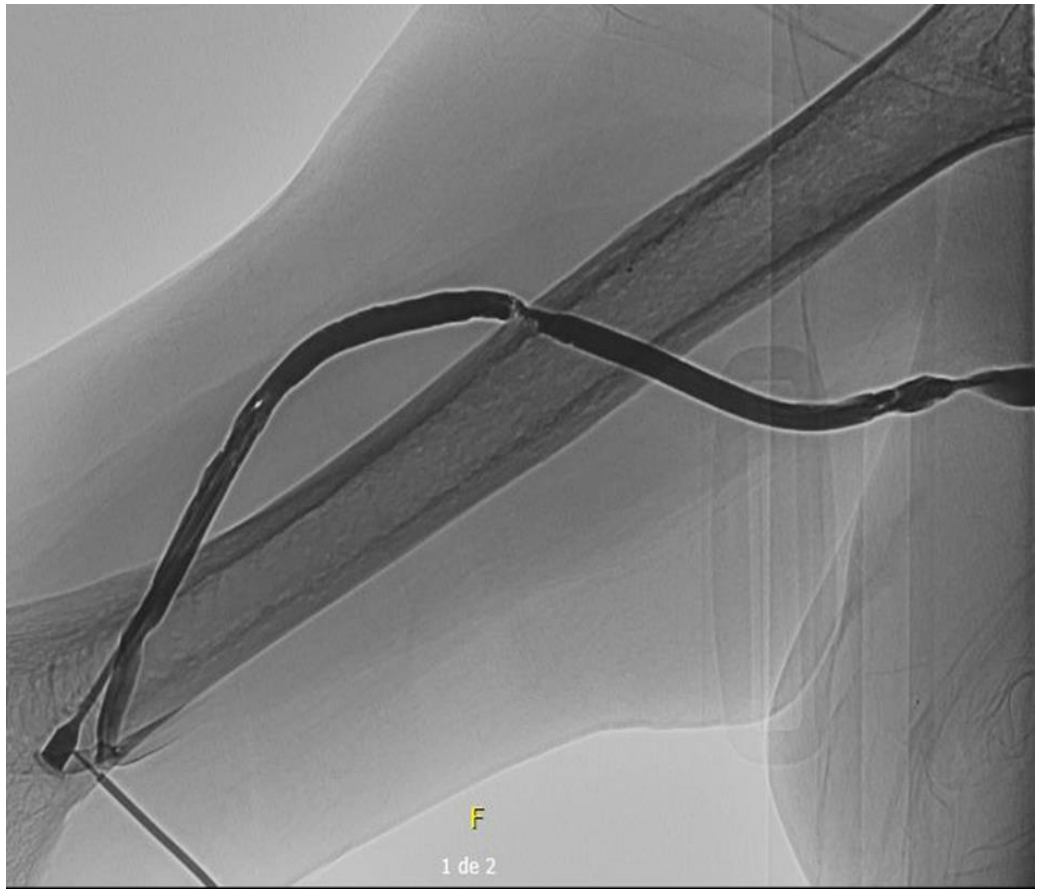
previous avf failed in both arms

MDT: decision to create a brachioaxillary graft

Graft clotted after one week: surgical thrombectomy

After 2 weeks graft was clotted again: declotting was hybrid (open plus fistulography which showed 2 stenosis within the graft which were treated with pta and DEB)

Case provided by: Flavia Genitle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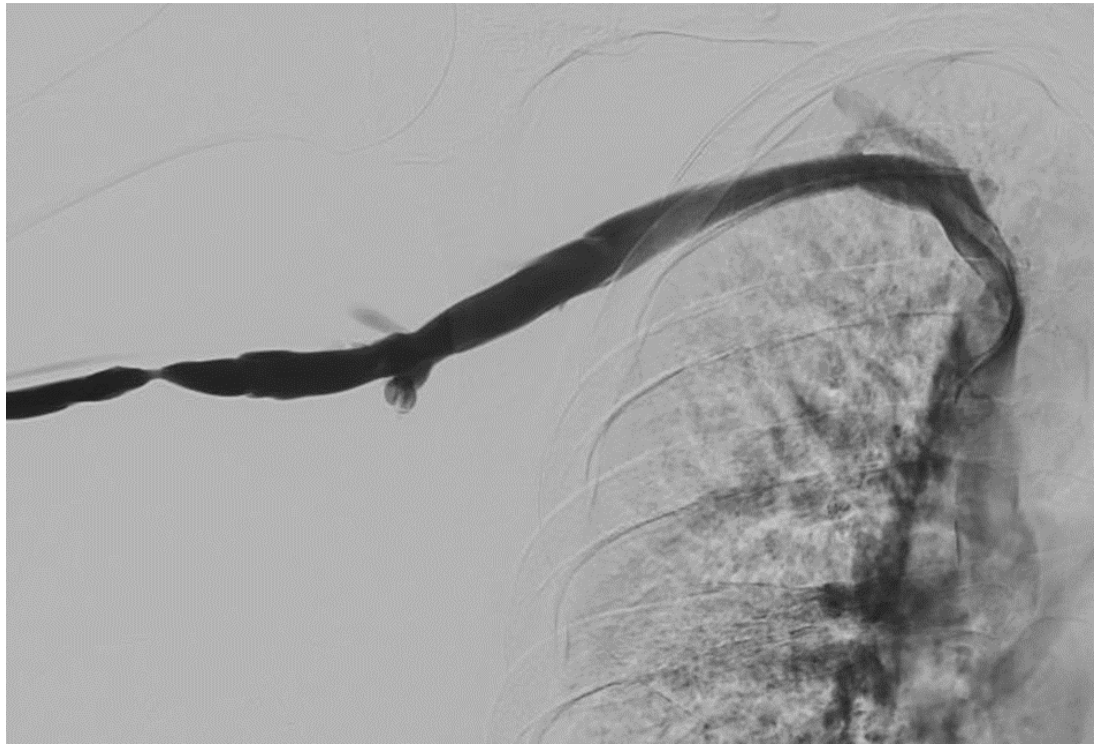
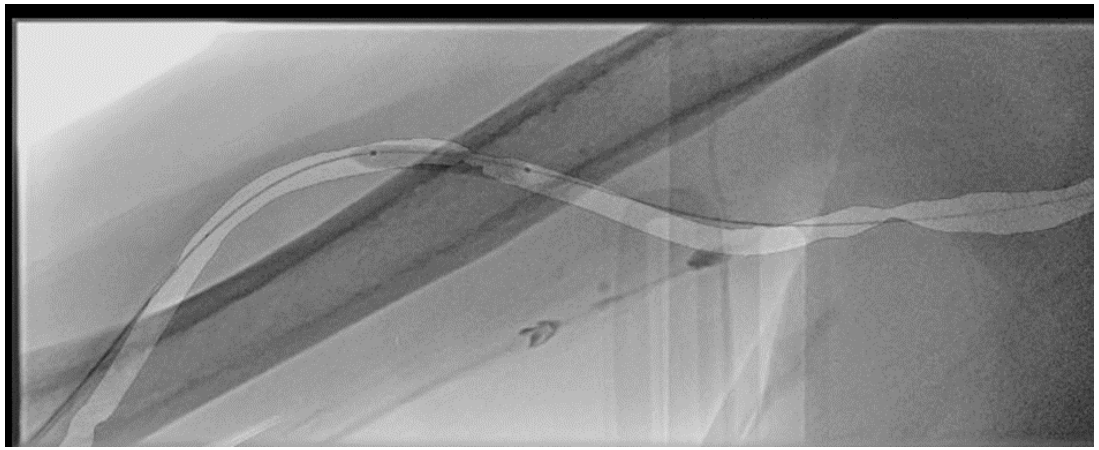
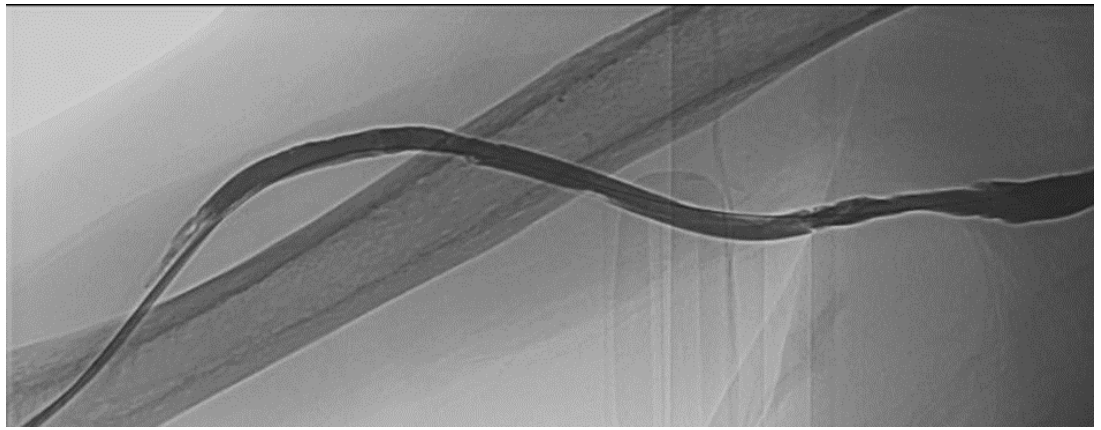
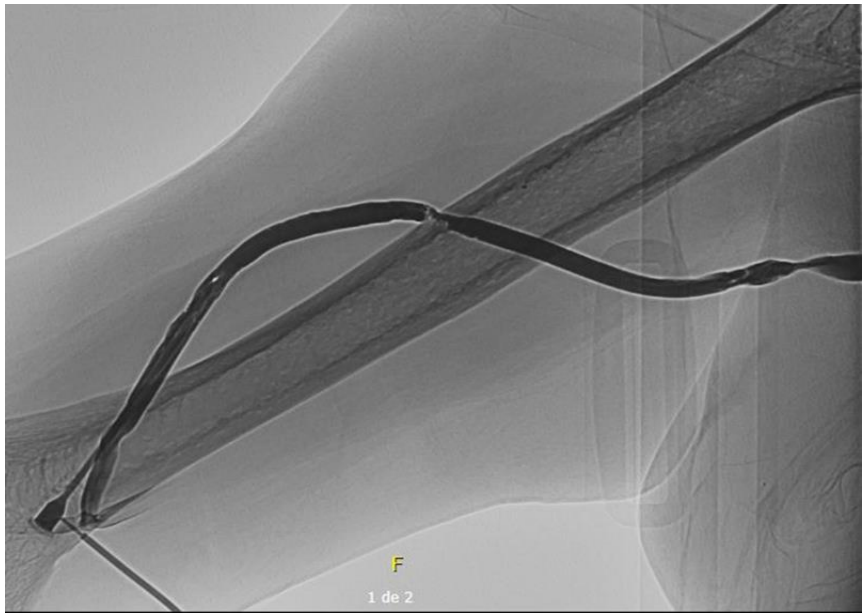




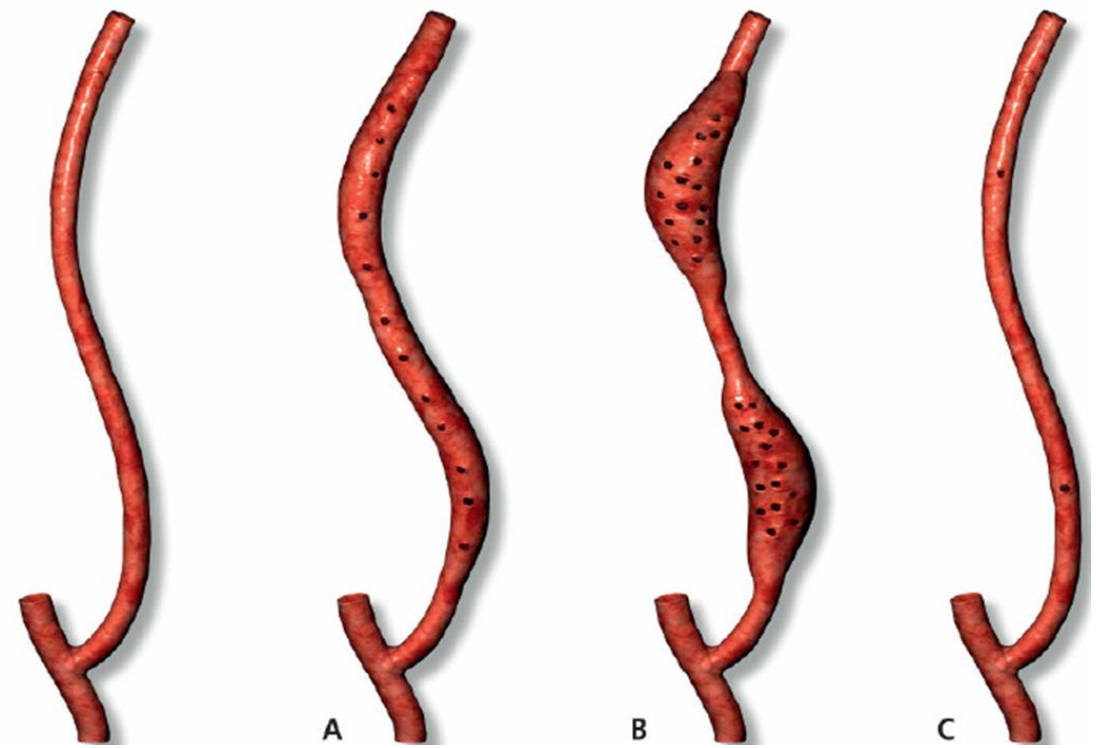


PTA : 6 mm x 40 mm and 7 mm x 40 mm.
Pta with DEB 6 mm x 40 mm and 7 mm x 40 mm.

- Graft clotted after one weeK: MDT decision to replace the graft



- Needling?



About Vascular access thrombosis

- VAT is a severe complication requiring a timely treatment
- Early thrombosis is most often due to an inflow problem (juxta anastomosis stenosis), late thrombosis tends to be due to an outflow stenosis
- About 80-50% of arteriovenous access failure come from AV access thrombosis, more than 80% results from AVF stenosis.

RISK FACTORS?

- Systemic factors such as hypotension, higher hemoglobin target,and hypercoagulability result in increased risk of access thrombosis for both fistulas and grafts.
- Patient factors such as sex (female) and diabetes increase risk of fistula thrombosis as well.
- A history of recent onset of difficulty needling, a significant drop in access flow (>25% drop from baseline), a new onset of low access flow (<500 mL/min) or significant recirculation all may be clues to an impending fistula thrombosis.
- Often there is a history of increased venous and/or arterial pressures noted with a pump speed of 200 mL/min during the first few minutes of dialysis (pressure trend monitoring).
- Grafts, however, often present with no warning symptoms prior to thrombosis.

TREATMENT OPTIONS

Endo:

Catheter thrombolysis (contraindications and risks: elderly, recent bleed, pregnancy, time consuming? Pt admitted to ICU for surveillance, costly?)

PTA (basically just smashing thrombus ,just POBA alone risk significant of clot emboli, beneficially in difficult outflows/inflows with difficult stenosis)

- Mechanical thrombectomy (angiojet+/- thrombolysis),
- Thromboaspiration (Indigo)

Open (involved the use of a Fogarty balloon catheter to express thrombotic material in antegrade and retro- grade fashion through a selected fistulotomy site to restore inflow and outflow)

Hybrid approach

ENDO	OPEN
Remove thrombus and treat underlying stenosis	Remove thrombus and allows anastomotic revision

WHICH TREATMENT?

- Evidence????

Recommendation 64	Class	Level	Refs.
Surgery or endovascular methods should be considered for treatment of late thrombosis of vascular accesses depending on the centre's expertise.	IIa	B	270,271
Recommendation 65			
Treatment of vascular access thrombosis should include peri-operative diagnosis and treatment of any associated stenosis.	I	C	548,552,553

CONCLUSION

- Restore the flow asap
- Keep the patient catheter-free
- Surgical or hybrid approach when segment replacement is needed