

Emergency Surgical Complication of Hemodialysis Access

“Advance meeting in dialysis access 2019”

One-day in Vascular Disease

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Hemodialysis access complication

Central venous catheter

- Arterial puncture
- Infection

Hemodialysis access complication

Permanent access

- Thrombosis
- Infection
- Ischemic steal syndrome
- Aneurysm
- Venous hypertension
- Prolong bleeding
- Heart failure

Emergency surgical complication

Arterial puncture of hemodialysis catheter

How to management

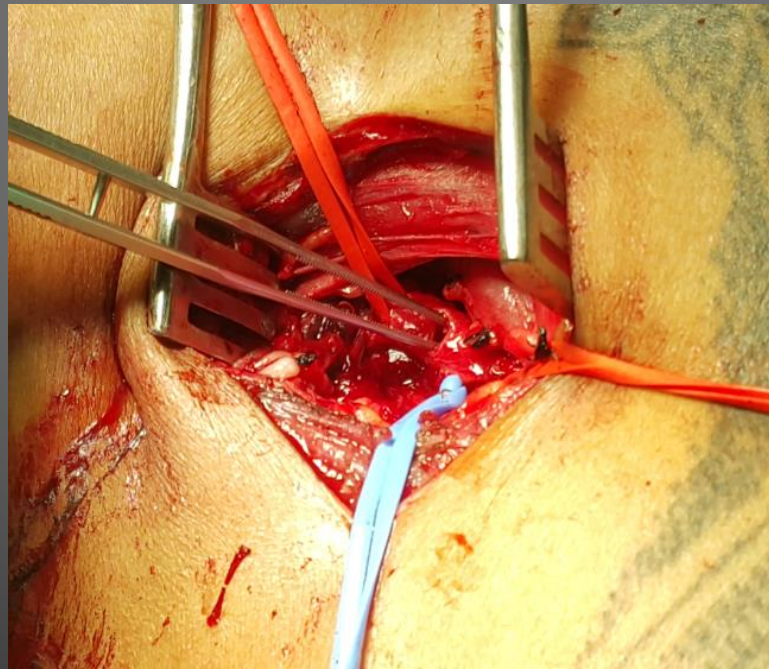
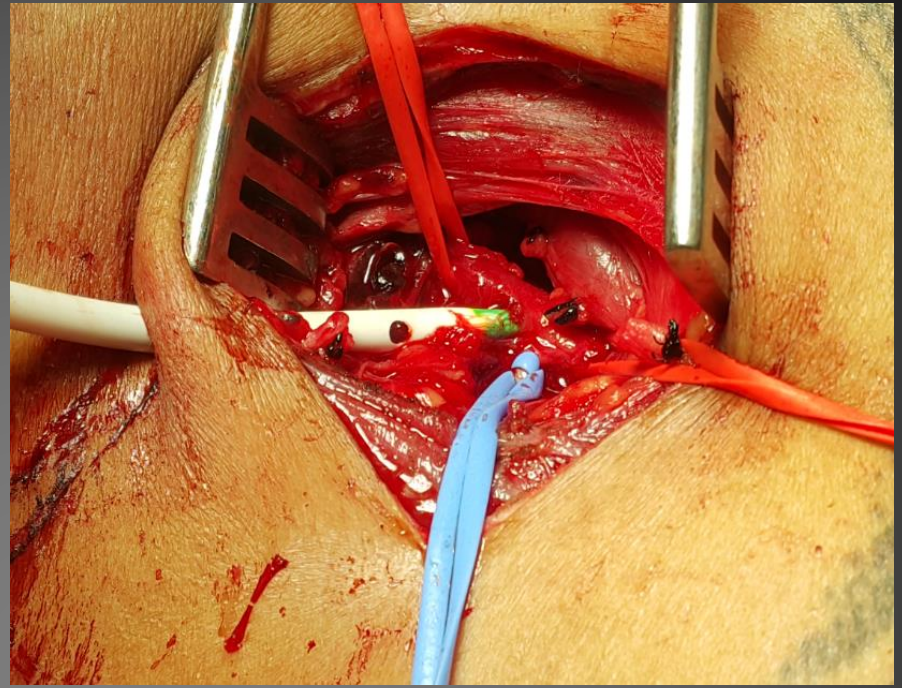
- Reassure
- Don't remove catheter from punctured site
 - Temporary catheter – diameter of 11-12 Fr
 - Permanent catheter – diameter of 14.5-15.5 Fr
- Consult surgeon/vascular surgeon

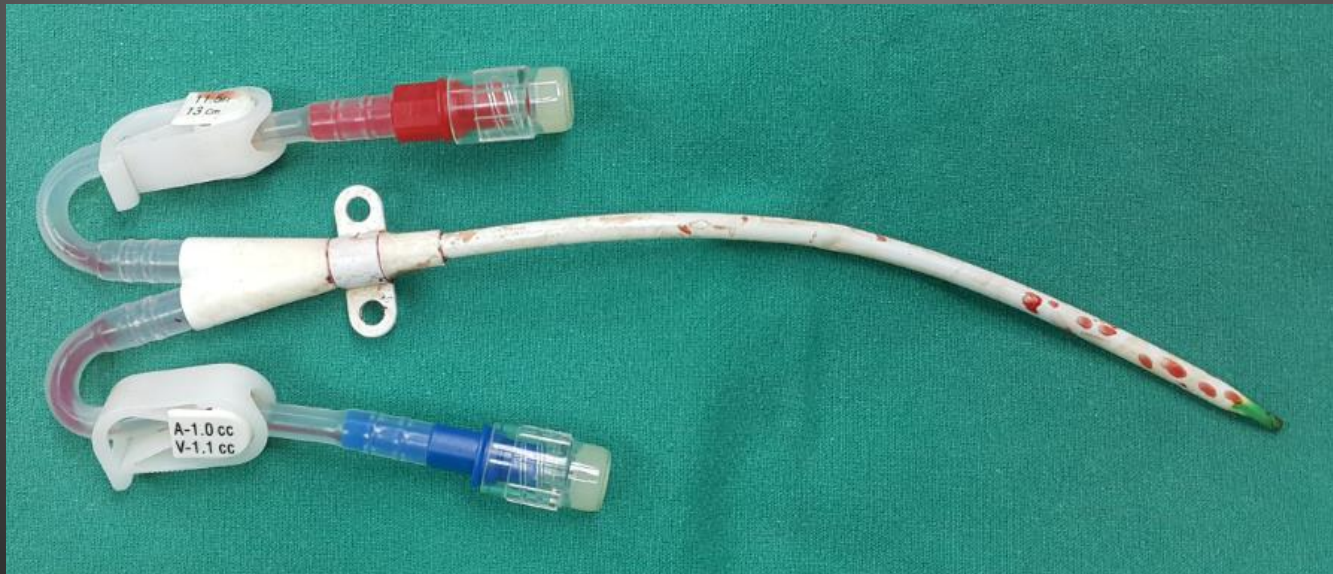
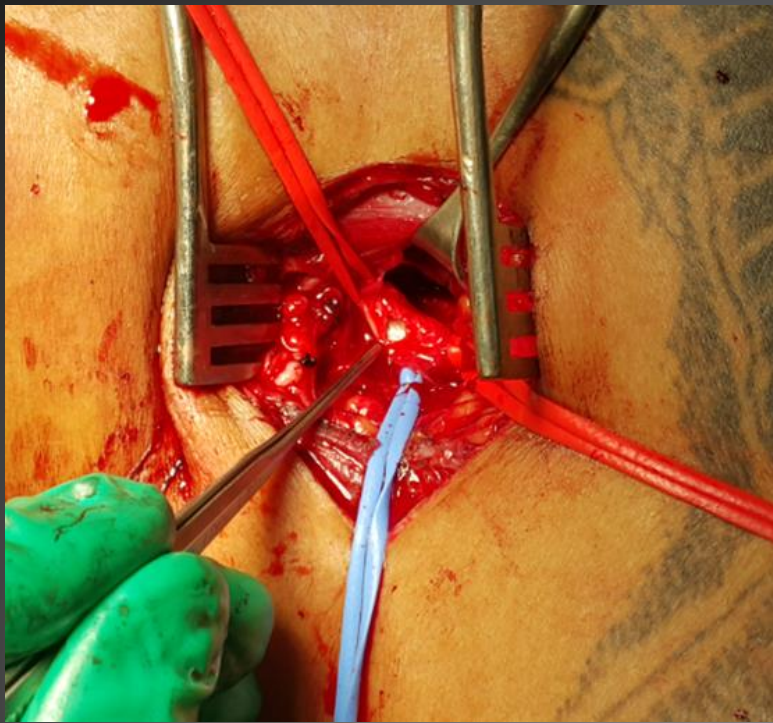
How to repair ??

- Open repair
 - Proximal and distal control → direct repair
- Endovascular repair
 - Endovascular closure device
 - Stent graft

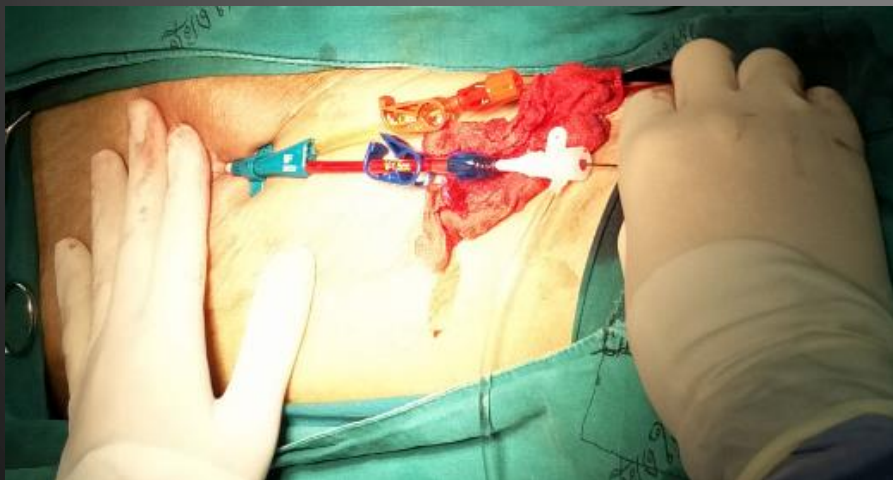
Arterial puncture of catheter for HD corrected with open repair







Arterial puncture of catheter for HD corrected with endovascular technique

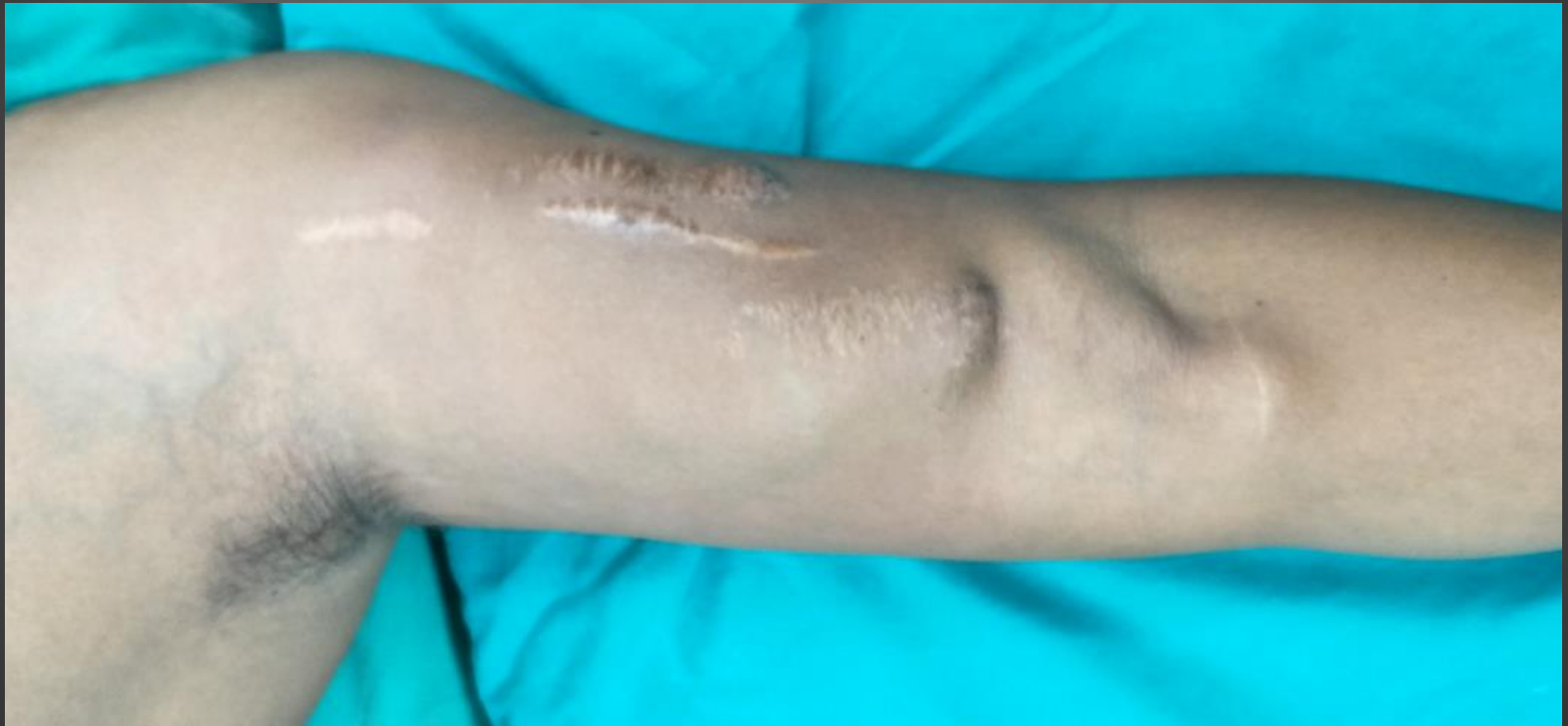


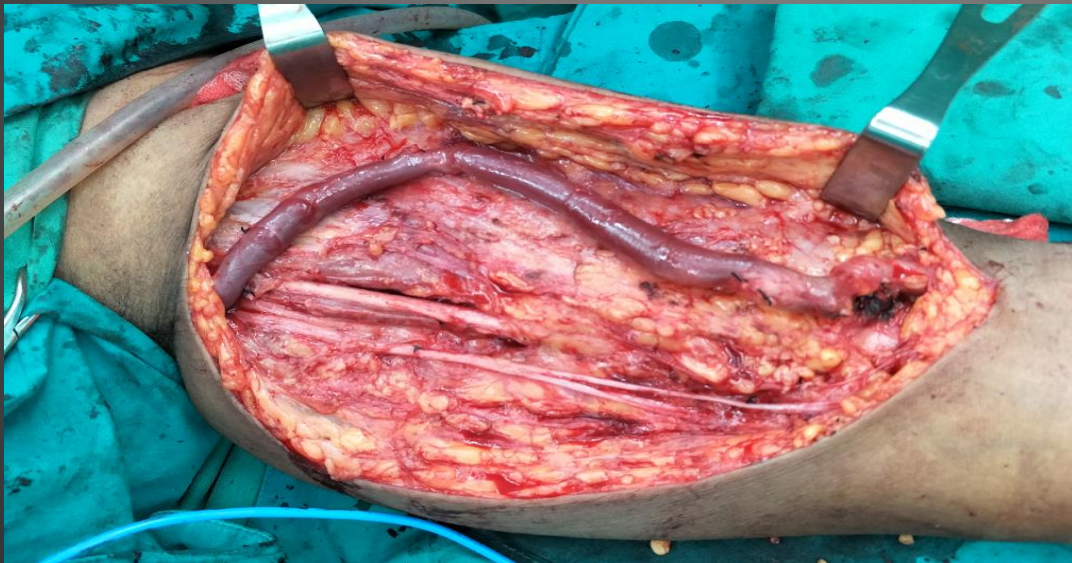


Thrombosed AVF/AVG

- ***AVF thrombosis***
 - Early thrombosis can be corrected with Thrombectomy and revised venous outflow(Open vs Balloon angioplasty)
- ***AVBG thrombosis***
 - Mostly due to venous outflow occlusion
 - Thrombectomy + Corrected venous outflow

Thrombosed AVF with phlebitis





Procedure : Excision thrombosed AVF
+ Superficialization basillic vein



Aneurysm

- *True aneurysm*
 - Giant AVF → Advise + reassure
 - Progressive larger → Excision
- *Pseudoaneurysm*
 - Non-infection → observe
 - Infection/Bleeding → Excision



- Giant AVF

AVF true aneurysm



Infected AVF



Bleeding infected AVF





Post-access induced ulcer

- *Ischemic(Arterial) ulcer*
 - Steal syndrome
 - Concomitant PAD

- *Venous ulcer*
 - Venous hypertension



Venous ulcer after AVF creation



Post-op week 1st - Closure AVF



Post-op week 12th - Closure AVF



Venous ulcer after AVF creation(2)



Post-op day 9th
;closure dorsal branch of cephalic vein



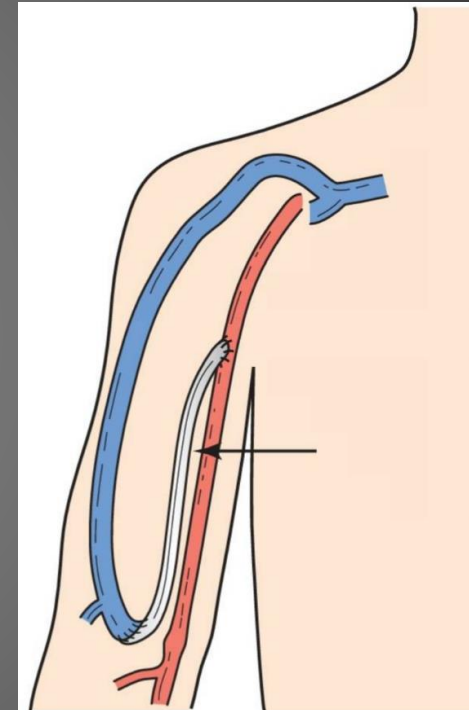
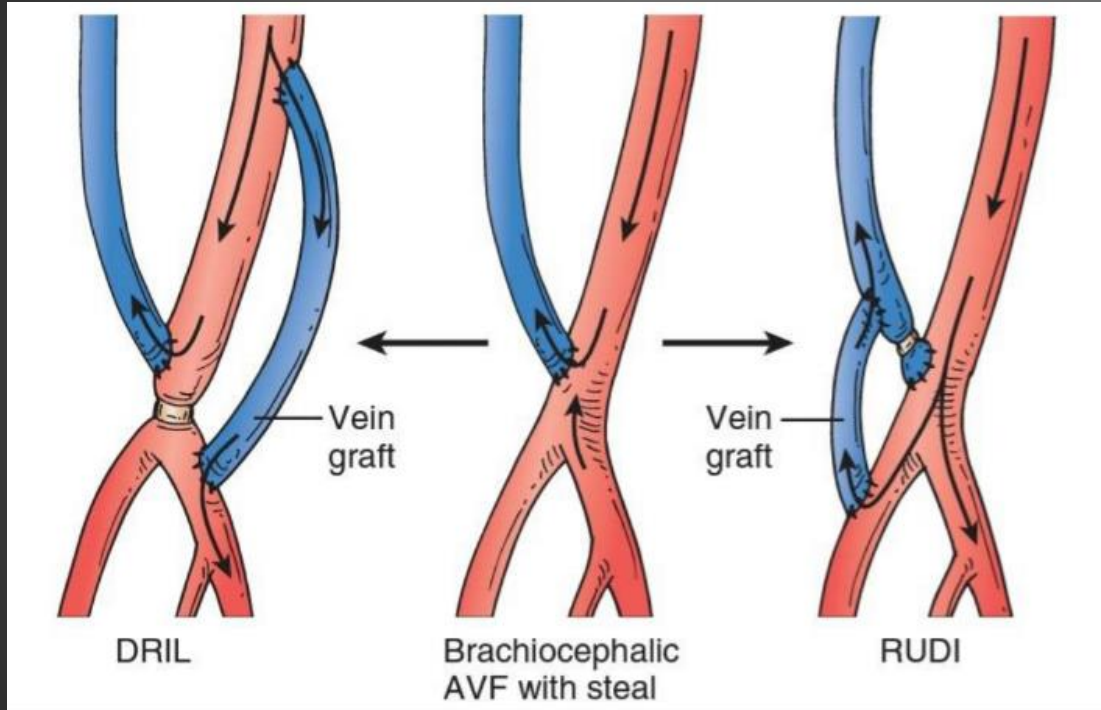
- *Steal syndrome*
- *Venous hypertension*
- *Infected hand*







Surgical correction of steal syndrome



Conclusion

In emergency surgical complication

“Early recognize”

“Transfer as need”

“Proper management”

“Patient can safe limb and safe life”

Thank you