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# Radiological and Imaging Sciences

School of Clinical Sciences Faculty of Medicine and Health

## **PURPOSES:**

To determine the feasibility of reducing edge neointimal hyperplasia combining Viabahn stent with drug eluting stents (PTX)

## **MATERIAL:**

> A retrospective review of 46 patients (33 males, average age 75 years old)

> Subdivided according to TASC II into C (n=14) and D (n=32)

Heparin bonded Viabahn<sup>®</sup> & Drug-eluting bare metal COOK - Zilver<sup>®</sup> PTX Sandwich stents for the treatment of TASC C & D femoral chronic total occlusion (CTO) A retrospective review of short and midterm outcome

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> PTA with stenting as a limb saving procedure surgically unfit patients.

- > Our technique deploys is explained in Diagram (1)
- > 1ry outcome was stent patency at short & midterm follow up

(3 & 12 months respectively), to be confirmed by clinical & duplex assessment



Recanalisation using Outback device into extra anatomical route to joint true lumen CASE - 1B

SFA top end is stented with [8cm/6mm] PTX covering a CASE - 1C Sequential images demonstrating reconstituted flow distally

PTX stent [12cm/5mm] to join the true lumen below knee



Diagram (1): Our technique deploys Viabahn stent(s) along the diseased vessel to be sandwiched between 2 PTX stents if possible (one on each end of Viabahn) with one

below knee joint

CASE - 1A

proximal Viabahn stent [15cm/5mm]

Covering a distal Viabahn [15cm/5mm]



## centimetre overlap.



CASE - 2B Post recanalisation of occluded SFA (subintimal route) Using proximal PTX drug eluting stent [4cm/6mm] (black arrowhead) Viabahn stent [10+15cm long 6mm diameter]

(white arrowhead)

CASE - 2C \* Re-canalisation of

\* Re-canalisation of the distal popliteal to restore excellent flow
\* Using 5mm & 3mm balloon, distal end of Viabahn (black arrowheads)
\* Covered with a PTX [4cm/6mm] (white arrowheads)

### OUTCOME OF PATENT OCCLUSION DECEASED

- > Average length femoral artery CTO = 28cm (+/- 7.1cm)
- > Average of 24 hours in hospital admission
- > Average follow duration 6 months (min. 2, max. 18)
- > Recorded deaths were due to unrelated aetiologies
- > A total of 58 heparin bonded Viabahn stents and
  - 90 drug eluting PTX stents were used

FOLLOW UP DURATION OF FOLLOW UP		VESSEL		
SHORT	TASC II			
	[C]	ך 11	NIL	ך 1
TERM		- 43%		
	[D]	9 ]	11 / 46 (24%)	2
LONG	TASC II			<b>-24 %</b>
	[C]	ך 11	NIL	2
TERM		- 43%		
	[D]	9 ]	13 / 46 (28 %)	6 _

## **CONCLUSIONS:**

**RESULTS:** 

- > The results reiterate our previous work where Patients with TASC D lesions developed early occlusions
- > No evidence of edge neointimal hyperplasia at short and midterm follow up, in particular TASC C
- > This combined technique (PTX/Viabahn) is only offered for limb salvage when there is no surgical alternative

#### **REFERENCES:**

- 1) Early results with the use of heparin bonded stent graft for chronic femoro-popliteal occlusive disease- TASC D lesions have a poor outcome. Habib SB et al. CardioVascular & Interven. Rad. J 2012
- 2) Results with Viabahn-assisted subintimal recanalization for TASC C and TASC D superficial femoral artery occlusive disease. JR Schneider et al. Vasc Endovascular Surg. 2011
- 3) The feasibility of re-entry device in recanalization of TASC C and D iliac occlusions. Habib SB et al. Vasc Endovascular Surg. 2011