



# **A Complicated EVAR for Aortoiliac Aneurysm along with Internal Iliac artery occlusion using a VSD Occluder Device**

**Waseem Raja**

**Sohail Aziz**

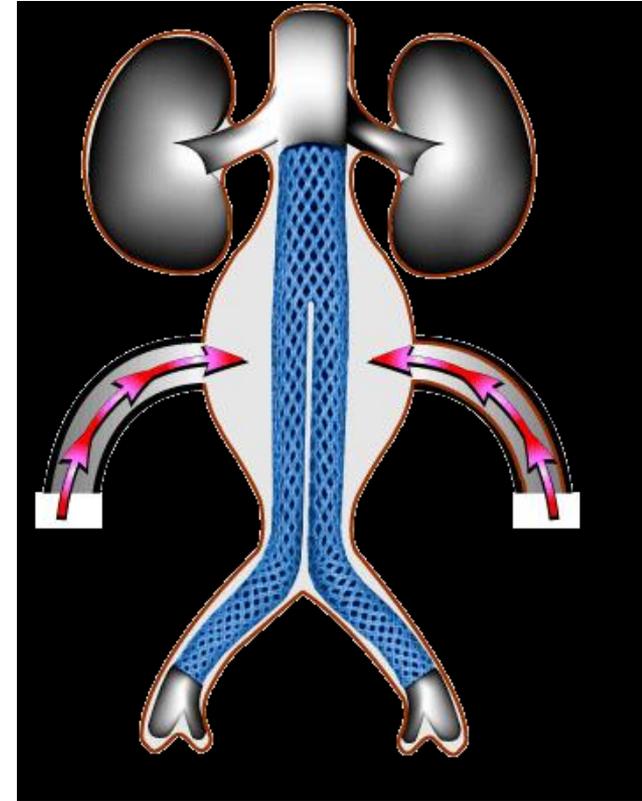
**Farhan Tuyyab**

**Department of Cardiology, AFIC/NIHD Rawalpindi, Pakistan**

# Why Internal Iliac Occlusion?

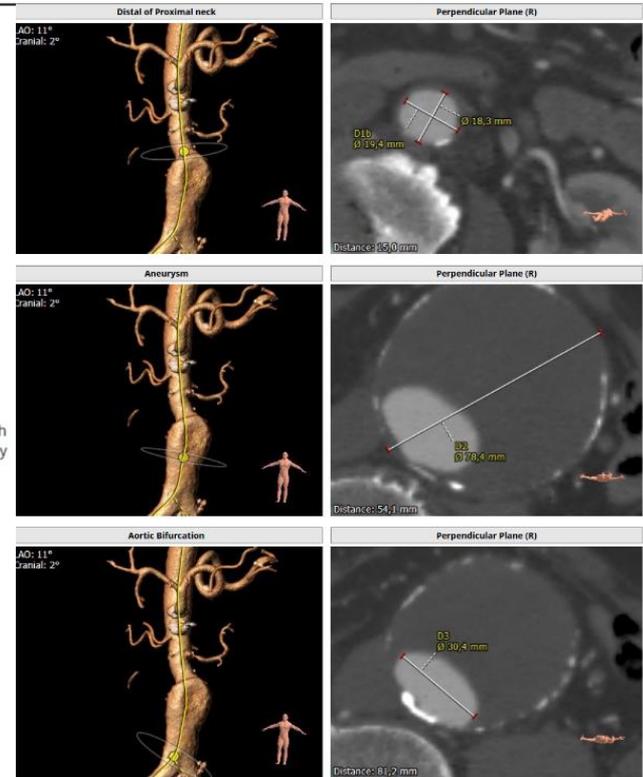
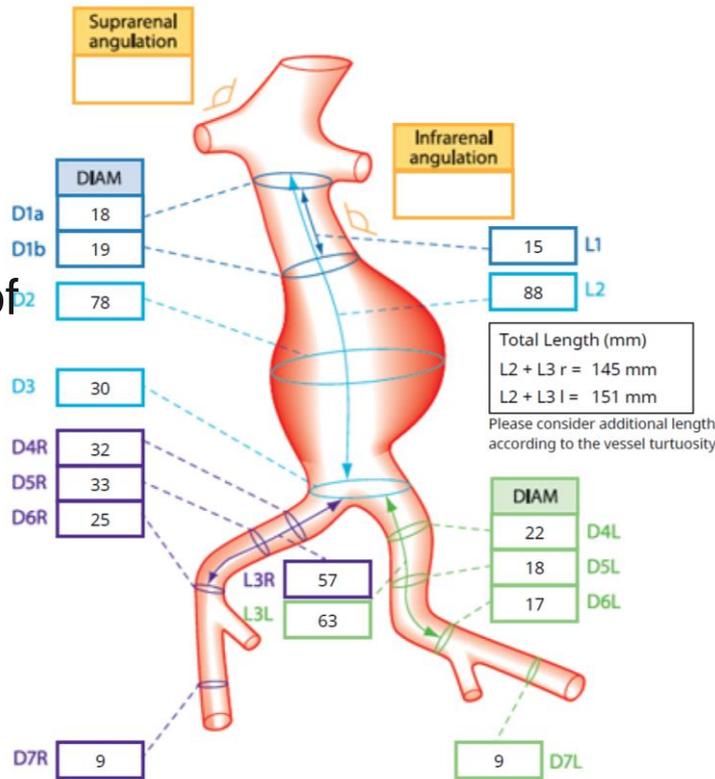
## Type II Endoleak

- 20% of patients with AAAs have aneurysms extending into the CIA
- In these situations, therapeutic embolization of the internal iliac arteries (IIAs) before or concurrent with EVAR deployment is required to avoid potential endoleaks.



# A 70 Years Old M with Fusiform AAA

- 70 Years Old Male
- Pre-Diabetic(HbA1C 5.9%)
- Early Dementia
- Fusiform Dilatation of AA (78 mm), 15 mm below Renal Artery
- Unremarkable Systemic Exam
- Normal Kidney and Liver functions
- Normal TSH
- LVEF 40%
- No significant Coronary Artery Disease



## Aneurysm Extending into Right Common and External Iliac Artery

### Right Common Iliac Artery Dimensions

D4R	31,9 mm
D5R	33,3 mm
D6R	24,7 mm
D7R	8,7 mm

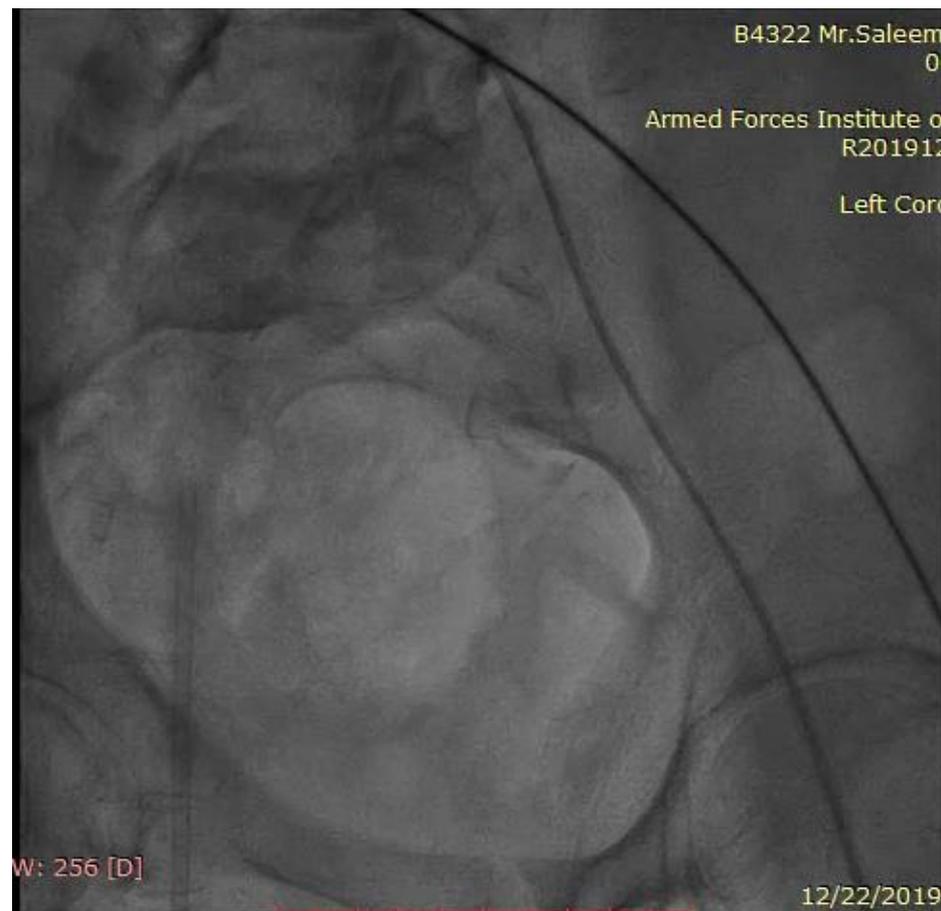
### Left Common Iliac Artery Dimensions

Label	Value
D4L	21,9 mm
D5L	18,4 mm
D6L	16,8 mm
D7L	9,3 mm



- General Anesthesia
- US-guided femoral puncture
- Fully percutaneous approach with Vascular Closure Device (Proglide)
- VSD Device closure of Right Internal Iliac artery using left Transfemoral approach
- Prosthesis: Endurant II Stent Graft System 18F (Medtronic) & Endurant Graft System 16 F for contralateral limb
- Amplatz 0.035 super stiff wire for both sides

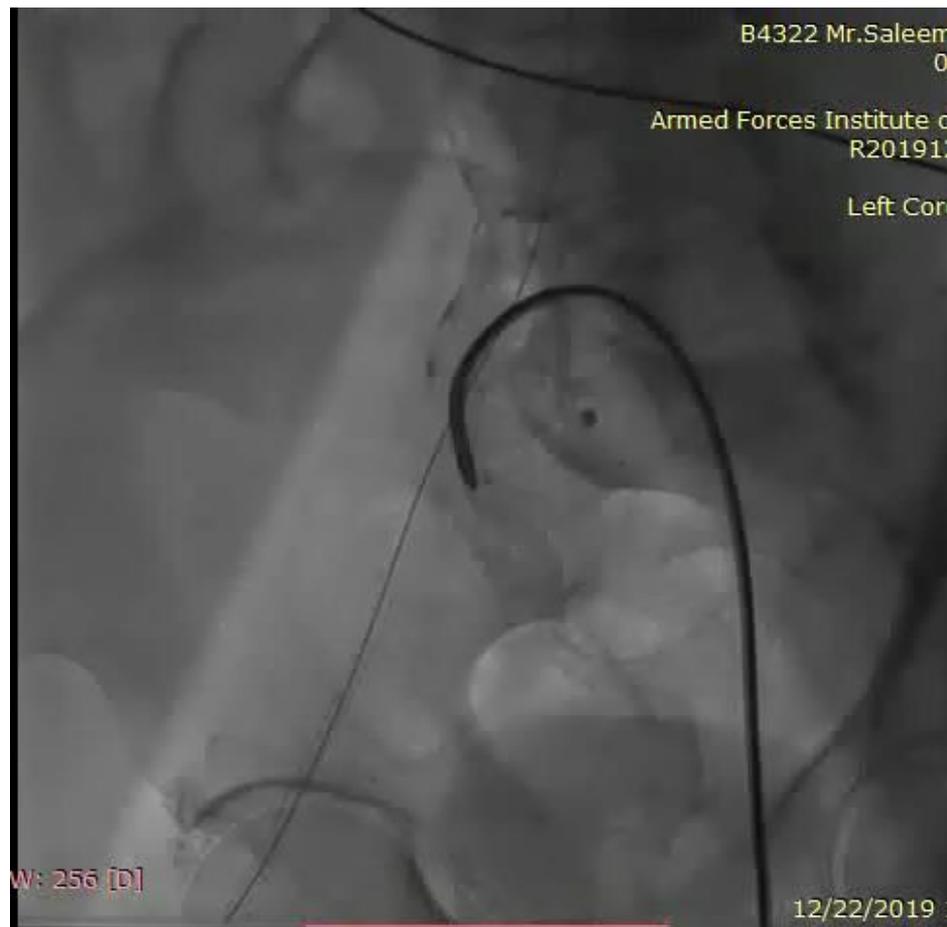
# Right Common iliac involvement



# Engagement of Internal Iliac Artery (IIA)



# VSD Device Delivery System



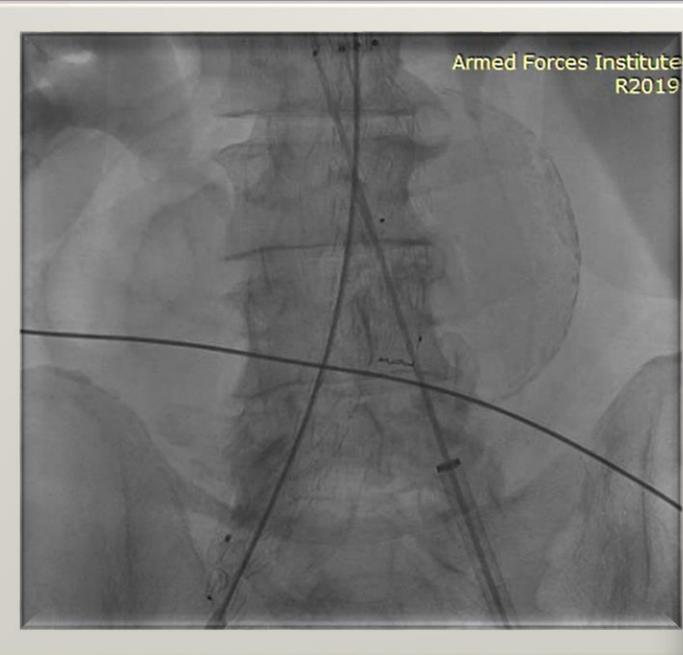
# VSD Device 8 mm AGA Deployed



# VSD Device 8 mm AGA Deployed



# Graft Deployed & Contralateral Limb Accessed and Left Limb Deployed



Endurant Stent Graft  
System 18 F 23×13 via  
Right TFA



Contralateral Limb  
Deployed



- Uneventful recovery from anaesthesia/procedure
- Dropped Hemoglobin requiring one transfusion
- Developed mild fever for couple of days, responding to antibiotics
- Placed on Heparin infusion for 24 Hours
- Discharged on DAPT (5<sup>Th</sup> Admission Day)
- Stable on follow up clinic visits
- No aneurysmal expansion/Endo leaks on 1,3 and 6 monthly CT Scan
- No Buttock claudication ,bowel ischemia

- IIA occlusion reduces the incidence of Endo Leak (coils, 2.74%; plugs, 0.24%; coverage, 5.53%)
- Exclusion of the IIA can result in buttock claudication (BC), erectile dysfunction (ED), and rarely pelvic or gluteal necrosis, colonic ischaemia, and spinal ischaemia.
- More often with bilateral IIA occlusion
- IIA preservation in high risk group can be performed by external iliac artery (EIA) to IIA bypass or with the usage of iliac branched devices (IBD)

## **Systematic Review and Meta-analysis of the Effect of Internal Iliac Artery Exclusion for Patients Undergoing EVAR**

D.C. Bosanquet <sup>a,\*</sup>, C. Wilcox <sup>a</sup>, L. Whitehurst <sup>a</sup>, A. Cox <sup>a</sup>, I.M. Williams <sup>a</sup>, C.P. Twine <sup>a,b</sup>, on behalf of the British Society of Endovascular therapy (BSET)

<sup>a</sup>South East Wales Regional Vascular Network, Royal Gwent Hospital, Newport, UK

<sup>b</sup>Division of Population Medicine, Cardiff University, Cardiff, UK