**Countess of Chester Hospital** 

NHS Foundation Trust

The Countess of Chester Health Park

Liverpool Road

Chester

CH2 1UL

Study Description: **US Doppler lower limb arteries Rt** Study Date: **03/04/2023**

**Indication:**

Redo right femoral to anterior tibial artery bypass graft on 11/01/23. For a graft surveillance scan at 3 months

**Report:**

**RIGHT ARTERIAL DUPLEX ASSESSMENT - RIGHT FEM- ATA BYPASS**

CFA - Obscured due to scarring and oedema, where seen appears patent, with good triphasic waveforms, PSV 150cm/s, PI 4.07.

Proximal anastomosis - Appears widely patent with good tri/biphasic waveforms, PSV 166cm/s.

Graft body - Appears widely patent along its length in the thigh and proximal calf, with good triphasic waveforms, PSV range 119-45cm/s.

Evidence of a isolated area in the proximal graft which demonstrates retrograde flow following peak systolic flow ? previous valve location, there is evidence of a echogenic object moving within the lumen ? reaming valve. Cine-loop has been taken and saved to carestream PACS for review. The retrograde flow velocity was 122cm/s in February 2023, and 167cm/s on today assessment.

Distal anastomosis (proximal ATA) - Appears widely patent, with turbulent flow. Compared to the distal graft, a velocity shift noted, PSV increase from 54cm/s to 199cm/s. There is a calibre difference between the distal graft and the native ATA, see dimension below ? Caused of velocity shift at the distal anastomosis.

At the region of the distal anastomosis, there is evidence of a arterial branch, which appears to be the native ATA, demonstrating retrograde flow, monophasic waveforms PSV 70cm/s.

Maximum outer-to-outer AP L.S.plane dimensions:

Distal graft: 0.52cm

Native ATA: 0.31cm

ATA - Appears widely patent from the distal anastomosis in to the ankle, with good biphasic waveforms, PSV 52cm/s.

**Conclusion**

**The right fem-ATA graft is widely patent with Doppler wave forms and velocities that do not suggest the presence of any significant stenosis or occlusion.**

**The proximal and distal anastomosis appear widely patent. However a velocity shift noted at the distal anastomosis ? Due to calibre change of graft and native ATA.**

**Evidence of a isolated area in the proximal graft which demonstrates retrograde flow following peak systolic flow, and PSV today was 167cm/s compared to 122cm/s in February 2023 ? previous valve location, on grey scale imaging a small echogenic object can be seen ? remaining value. Cine-loop has been taken and saved to carestream PACS for review.**

**Priority:++ Significant or Unexpected Finding ++**

**Reported by:**

Nia Steeves

Clinical Vascular Scientist

Countess Of Chester Nhs Trust

Final Date & Time: 03/04/2023 17:08:04