**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: **05/04/2023**

**Indication:**

claudication 100m, cap refill 7 sec by GP?? no tissue loss please complete

**Report:**

**BILATERAL LOWER LIMB ARTERIAL DUPLEX SCAN**

**\* Left lower limb arterial images saved under the right lower limb arterial assessment on 5/4/23, due to technical error.**

Aorta – Widely patent with good biphasic flow, PSV 95cm/s. Vessel appears to be of normal and uniform caliber - maximally measuring cm (T.S. plane; outer-to-outer wall 2.1cm).

**RIGHT**

CIA – Patent with good biphasic waveforms, PSV 95cm/s.

EIA – Patent with good tri/biphasic waveforms, PSV 64-99cm/s.

CFA – Patent, however evidence of echolucent/ low echogenic disease (? thrombus) noted in the proximal CFA which appears to form a moderate/ severe stenosis. A velocity shift identified when compared to the distal EIA, PSV increases from 99cm/s to 252cm/s (PI 3.97), and turbulent triphasic waveforms noted. Maximum dimensions of the CFA is 1.6cm, appear large in caliber however it does not appear focal dilated.

PFA (origin) – Patent with moderate low echogenic disease based on colour flow imaging, turbulent bidirectional waveforms identified, PSV 138cm/s. Appears to be a collateral vessel near the origin of the PFA ? cause of bidirectional flow.

SFA – Patent along its length. Turbulent triphasic waveforms noted at the SFA origin, PSV 148cm/s.

Mild mixed disease identified in the prox-mid SFA, slightly reduced triphasic waveforms, PSV 68-60cm/s.

Moderate stenosis identified in the mid SFA at approx. 61cm prox to the medial malleolus (MM) and extends over a length of approx. 1.5cm. PSV increases from 82cm/s to 190cm/s. Turbulent biphasic waveforms noted distal to stenosis, PSV 167cm/s.

Moderate stenosis identified in the distal SFA a approx. 57cm prox to the MM and extend over approx. 1.53cm. PSV increases from 70cm/s to 217cm/s. SFA appears patent through the adductor canal with slightly reduced triphasic waveforms, PSV 64cm/s.

POPA – Patent along its length with mild disease, good triphasic waveforms, PSV 50-47cm/s.

TPT – Patent with good triphasic waveforms, PSV 45cm/s. Origins of 3 vessel run off identified.

PTA – Patent to the ankle with good monophasic waveforms, PSV 45-50cm/s.

ATA – Patent in the proximal calf with good monophasic waveforms, PSV 37cm/s. Large collateral vessel noted off the ATA in the mid-calf, distal to this the ATA appears to chronically occlude. The ATA appears to reform via a collateral in the distal calf, with slightly reduced monophasic waveforms, PSV 34cm/s.

PerA – Patent to the ankle with good tri/biphasic waveforms, PSV 40-26cm/s.

Right ABPI

Resting branchial systolic blood pressure – 144mmHg

Right resting PTA systolic blood pressure – 134 mmHg

Right post-exercise PTA systolic blood pressure – 124 mmHg

ABPI rest: 0.9

ABPI post-exercise (foot flexion and extension) exercise challenge: 0.9

Right resting ABPI is within normal limits, with no significant reduced in ABPI following a one-minute exercise challenge (foot flexion and extension).

**RIGHT CONCULSION**

**Evidence of echolucent / low echogenic disease (? Thrombus) in the right CFA forming a moderate/ severe stenosis.**

**Moderate stenosis identified in the mid and distal SFA.**

**ATA appears to chronically occlude in the mid-calf and appears to reform in the distal calf.**

**ABPI at rest and following exercise is within normal limits.**

**LEFT**

CIA – Patent with good biphasic waveforms, PSV 40cm/s.

EIA – Patent with good triphasic waveforms, PSV 74-73cm/s.

CFA – Patent with mild/moderate mixed, dense, and calcified disease. Good triphasic waveforms, PSV 114cm/s, PI 2.43.

PFA (origin) – Patent with mild mixed disease, good triphasic waveforms, PSV 86cm/s.

SFA – Appears chronically occluded along its length, no colour flow or PWV detected.

POPA – Appears chronically occluded along its length, no colour flow or PWV detected. Flow appears to reform in the mid POP V, with reduced monophasic waveforms, PSV 48cm/s. Distal POP A appears patent with reduced monophasic waveforms, PSV 35cm/s.

TPT – Patent with reduced monophasic waveforms, PSV 28cm/s. Origins of 3 vessel run off identified.

PTA – Patent in the prox-mid vessels with reduced monophasic waveforms, PSV 15-13cm/s. Collateral vessel noted off the PTA in the mid-calf, distal to this the mid-distal PTA is chronically occluded.

ATA – Patent along its length with reduced monophasic waveforms 36-33cm/s.

PerA – Patent to the ankle with reduced monophasic waveforms, PSV 29-12cm/s.

Left ABPI

Resting branchial systolic blood pressure – 144mmHg

Right resting PTA systolic blood pressure – 50 mmHg

Right post-exercise PTA systolic blood pressure – 25 mmHg

ABPI rest: 0.3

ABPI post-exercise (foot flexion and extension) exercise challenge: 0.2

Right resting and post exercise (one-minute exercise challenge, foot flexion and extension) ABPI is critically reduced.

**LEFT CONCLUSION**

**SFA is chronically occluded. The proximal POP A is chronically occluded. Flow appears to reform in the mid POP A.**

**The PTA appears chronically occluded in the mid-distal calf.**

**Resting and post-exercise ABPI is critically reduced.**

**Additional comments: ? Start of necrosis on the 5th left toe, near nail bed.**

**Priority:** **++ Urgent Finding ++**

**Reported by:**

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Final Date & Time: 05/04/2023 11:47:32