**Countess of Chester Hospital** 

NHS Foundation Trust

The Countess of Chester Health Park

Liverpool Road

Chester

CH2 1UL

Study Description: **US Doppler carotid artery Both** Study Date: **09/03/2023**

**Indication:**

RIGHT ARM AND FACIAL WEAKNESS

**Report:**

**CAROTID DUPLEX SCAN**

**RIGHT**

Subclavian artery: Patent proximally with good biphasic waveforms, PSV 45cm/s.

Common Carotid Artery (CCA): Patent. Minimal mixed plaques identified forming a <30% stenosis.

PSV 74cm/s EDV 9cm/s

Bifurcation: Patent. Mixed and dense plaques, forming a <30% stenosis.

Internal Carotid Artery (ICA): Patent. Mixed plaque identified in the proximal ICA forming a <30%. Unable to visualize the mid-distal ICA due high bifurcation, however waveforms in the proximal ICA are low resistance suggesting distal patency.

PSV 114cm/s EDV 29cm/s

External Carotid Artery (ECA): Patent. Mixed and dense plaques, forming a <30% stenosis.

PSV 65cm/s

Vertebral Artery Flow (VA): Poor visualisation due to depth and acoustic shadowing, where seen appear patent with open and orthograde flow.

PSV 81cm/s

**LEFT**

Subclavian artery: Where seen appear patent proximally with reduced monophasic waveforms, PSV 55cm/s. ? Significant disease at the subclavian artery origin or in the aortic arch, suggest alternative imaging.

Common Carotid Artery (CCA): Patent. Minimal mixed plaques identified forming a <30% stenosis. Waveforms appear reduced, suggesting significant disease proximally ? Within aortic arch. Waveforms also appear high in resistance suggesting significant disease distally.

PSV 64cm/s EDV 0cm/s

Bifurcation: Patent. Echolucent (acute) thrombus identified in the bifurcation forming a <50% stenosis.

Internal Carotid Artery (ICA): Evidence of echolucent (acute) thrombus within the proximal ICA, appears to extend from the bifurcation. The ICA appears patent at this time, however based on diameter reduction measurements (ECST) thrombus appears to be forming at stenosis >85%. Unable to perform NASCET diameter reduction measurements as poor visualisation of the ICA due to high bifurcation, unable to determine the leading edge of the thrombus from these images. Including the bifurcation the thrombus is >2.90 in length. No raised velocities identified, PSV 25cm/s EDV 13cm/s, this would suggest the thrombus is forming a stenosis >90% (near occlusive).

St. Mary’s Ratio (ICAPSV/CCAEDV): 25 (suggestive of a 80-89% stenosis).

External Carotid Artery (ECA): Patent. Mixed plaques, forming a <30% stenosis. Waveforms appear reduced.

PSV 102cm/s

Vertebral Artery Flow (VA): Poor visualisation due to depth and acoustic shadowing, where seen appear patent with open and orthograde flow.

PSV 51cm/s

**Conclusion**

**No evidence of significant right carotid disease. Where seen the right VA appears antegrade.**

**Evidence of echolucent (acute) thrombus within the left bifurcation and proximal ICA, appears to form a stenosis >90% in the proximal ICA. High bifurcation noted, poor images unable to determine the leading edge of thrombus.**

**Reduced waveforms noted in the left CCA and left subclavian artery ? Significant disease at the left subclavian artery origin or in the aortic arch**

**Suggest urgent alternative imaging and urgent vascular opinion.**

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

**Reported by:**

Nia Steeves

Clinical Vascular Scientist

Countess Of Chester Nhs Trust

Final Date & Time: 09/03/2023 12:49:18