

EXAM: Bilateral carotid ultrasound., REASON FOR EXAM: , Headache., TECHNIQUE: , Color grayscale and Doppler analysis is employed., FINDINGS: , On the grayscale images, the right common carotid artery demonstrates patency with mild intimal thickening only. At the level of the carotid bifurcation, there is heterogeneous hard plaque present, but without grayscale evidence of greater than 50% stenosis. Right common carotid waveform is normal with a peak systolic velocity of 0.474 m/second and an end-diastolic velocity of 0.131 m/second. The right ECA is patent as well with the velocity measurement 0.910 m/second., The right internal carotid artery at the bifurcation demonstrates plaque formation, but no evidence of greater than 50% stenosis. Proximal peak systolic velocity in the internal carotid artery is 0.463 m/second with proximal end-diastolic velocity of 0.170. The mid internal carotid peak systolic velocity is 0.564 m/second, and mid ICA end-diastolic velocity is 0.199 m/second. Right ICA distal PSV 0.580 m/second, right ICA distal EDV 0.204 m/second. Vertebral flow is antegrade on the right at 0.469 m/second., On the left, the common carotid artery demonstrates intimal thickening, but is otherwise patent. At the level of the bifurcation, however, there is more pronounced plaque formation with approximately 50% stenosis by the grayscale analysis. See the velocity measurements below: , Left carotid ECA measurement 0.938 m/second. Left common carotid PSV 0.686 m/second, and left common carotid end-diastolic velocity 0.137 m/second., Left internal carotid artery again demonstrates prominent focus of

hard plaque with up to at least 50% stenosis. This should be further assessed with CTA for more precise measurement. The left proximal ICA/PSV 0.955 m/second, left proximal ICA/EDV 0.287 m/second. There is spectral broadening in the proximal aspect of the carotid waveform. The left carotid ICA mid PSV 0.895, left carotid ICA mid EDV 0.278 with also spectral broadening present.,The left distal ICA/PSV 0.561, left distal ICA/EDV 0.206, again the spectral broadening present. Vertebral flow is antegrade at 0.468 m/second.,**IMPRESSION:** , The study demonstrates bilateral hard plaque at the bifurcation, left greater than right. There is at least 50% stenosis of the left internal carotid artery at its bifurcation and a followup CTA is recommended for further assessment.