A New Sign of Occlusion of the Origin of the Internal Carotid Artery

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SUMMARY When the origin of the internal carotid artery is occluded, the transmission of cardiac sounds along the carotid stops at the site of occlusion. This is a new neurovascular sign which is being reported.

The cardiac sound was transmitted normally up the left carotid distribution.

The usual laboratory studies were normal. Visual field examination revealed a visual field defect corresponding to the area of infarction.

On April 27, 1973, a right retrograde brachial angiogram revealed occlusion of the right internal carotid artery in the cervical region and stenosis at the origin of the right external carotid artery. The left carotid circulation was visualized and was normal.

Auscultation is a portion of the neurovascular examination which also includes inspection, gentle palpation, ophthalmoscopy and ophthalmodynamometry. Each or all components of the neurovascular examination may be normal in the presence of clinically significant cerebrovascular disease; however, abnormalities such as certain bruits, unilateral decrease in retinal artery pressure or retinal emboli are highly suggestive of carotid atherosclerosis producing stenosis or occlusion. This new sign should be considered in the same fashion as other abnormalities of the neurovascular examination; that is, if the new sign is present, it is highly suggestive of occlusion at the common carotid arterial bifurcation but if absent, it does not exclude a morphological abnormality.

Reference

FIGURE 1. Right carotid occlusion with lack of transmission of the aortic heart sound.
A new sign of occlusion of the origin of the internal carotid artery.
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