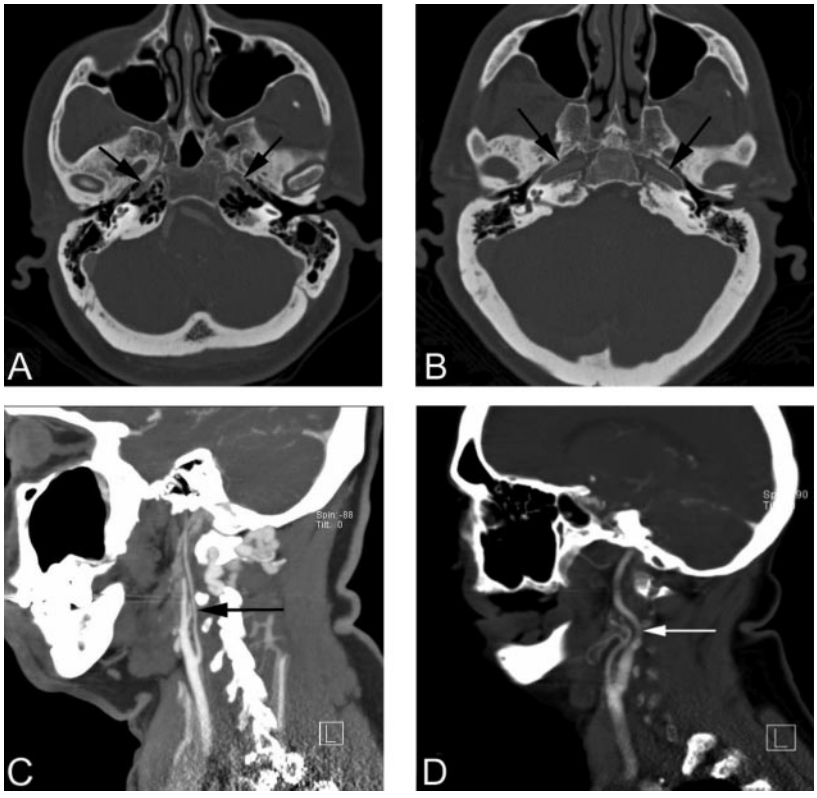
Congenital carotid hypoplasia in ischemic stroke

Figure (A) CT scan of skull base revealing hypoplasia of carotid canals, (B) normal carotid canals, (C) sagittal CT angiogram of head and neck showing hypoplasia of the internal carotid arteries (ICA), and (D) normal ICA



A 53-year-old woman with hyperlipidemia presented with acute onset left-sided weakness and slurred speech. Neurologic examination was remarkable for left central facial droop, left hemiparesis, and dysarthria. Imaging revealed a right insular ischemic stroke and hypoplasia of the internal carotid arteries (figure).

Congenital hypoplasia of the carotid arteries is rare. To differentiate carotid hypoplasia from carotid dissection or atherosclerotic disease, CT of the skull base reveals small carotid canals not seen in the other conditions. The enlargement of collaterals—particularly the posterior communicating arteries and posterior circulation—are indicative of carotid hypoplasia.[1] This is important when management with anticoagulation or endarterectomy is considered.

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