Multiple Asymptomatic Cervical Cephalic Aneurysms

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Summary: The authors describe the clinical and radiologic features of pseudoaneurysms of the extracranial carotid and vertebral arteries in a 35-year-old woman, presumably resulting from trauma from previous seizures.

Index terms: Aneurysm, extracranial; Aneurysm, intracranial; Arteries, cerebral; Arteries, carotid

Cases of multiple aneurysms of the cervical cephalic arteries are unusual (1). Numerous etiologies have been proposed including atherosclerosis, infection, trauma, developmental defects, and previous dissections (1-7). We present a case of extracranial aneurysms of both vertebral arteries and one internal carotid artery associated with intracranial venous angioma, berry aneurysm, and arterial fenestration.

Case Report

A 35-year-old woman with a 28-year history of complex partial seizures presented with breakthrough seizures despite therapeutic carbamazepine levels. Her initial seizure 28 years before was a grand mal seizure. Neurologic examination was unremarkable.

An electroencephalogram demonstrated a left temporal subcortical destructive pattern with mild to moderate encephalopathy with subcortical features. Magnetic resonance imaging demonstrated a right cingulate gyrus venous angioma and scattered small foci of high signal in the white matter. Cerebral angiography demonstrated bilateral extracranial vertebral artery aneurysms (Figs. 1A and 1B) and an extracranial left internal carotid artery aneurysm (Fig. 1C). A left posterior communicating artery berry aneurysm (Fig. 1C) and a fenestration of the right anterior cerebral artery were also demonstrated (Fig. 1D). The right cingulate gyrus venous angioma was confirmed by angiography (Fig. 1E).

Discussion

The etiologies of aneurysms of the cervical cephalic arteries include atherosclerosis, infec-

Received November 5, 1991; revision requested December 20; final revision received on March 30, 1992 and accepted on April 1.

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AJNR 14:31-33, Jan/Feb 1993 0195-6108/93/1401-0031 © American Society of Neuroradiology

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Fig. 1. Multiple cervical cephalic pseudoaneurysms (arrowheads) and intracranial vascular lesions.
A, Selective right vertebral artery injection, anteroposterior projection.
B, Selective left vertebral artery injection, lateral projection.
C, Selective left common carotid injection, lateral projection. Posterior communicating artery aneurysm also present (arrow).
D, Selective right internal carotid injection, oblique projection. Fenestration at the A1-A2 junction (arrow).
E, Selective right internal carotid injection, lateral projection. Venous phase demonstrates the venous angioma (arrows).
blend into the clinical picture in this patient with complex partial seizures.

References