Primary aortic sarcoma

A rare but critical cause of stroke

Figure 1 Radiologic findings

There were multiple infarctions detected on diffusion-weighted images at the first episode (A) and a massive hemorrhagic infarction on fluid-attenuated inversion recovery at the last episode (B) of stroke. An intraluminal mass in the aortic arch was demonstrated by contrast-enhanced CT (C, arrow) and transesophageal echocardiography (D, arrow).

A 64-year-old woman with an aortic mass experienced repeated recurrences of stroke (figure 1) and died 8 months later. The postmortem examination showed the tumor to almost completely obstruct the aortic lumen, while extending to the intracranial arteries without parenchymal invasion (figure 2). The pathologic diagnosis was undifferentiated aortic intimal sarcoma. Primary aortic sarcoma is a rare and aggressive tumor, with clinical symptoms including acute arterial embolism and disseminated metastasis.¹ Although arch atheroma is sometimes identified as a cause of cerebral emboli,² this case shows that primary aortic sarcoma should be included in the differential diagnosis of aortic arch diseases.

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Figure 2 Pathologic findings

Huge intravascular mass in the aortic root lumen (A, arrow). Histopathology (hematoxylin & eosin stain) demonstrates an intraluminal tumor (B, arrowheads), and high magnification reveals a variety of spindle-shaped cells with large, hyperchromatic, and pleomorphic nuclei (C). There was intravascular invasion of the tumor in the middle cerebral artery (D, arrow).

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