A 10-year-old boy was discovered hanging by a pair of pajama pants from the railing of an upper bunk bed. Resuscitation efforts were unsuccessful, and an autopsy was performed. Postmortem examination revealed a ligature furrow around the anterior and lateral aspects of the neck; examination of the brain revealed a 1.0-cm, well-circumscribed, soft, yellow lobulated mass on the ventral surface of the tuber cinereum (Figure 1). Histologic examination revealed that this lesion was composed of mature adipose tissue consistent with lipoma (Figure 2, hematoxylin-eosin, original magnification ×10). The results of brain examination were otherwise unremarkable. No developmental abnormalities were present. Death was attributed to hanging.

Intracranial lipomas are rare, with a prevalence rate of approximately 0.46%, accounting for less than 0.1% of all cerebral tumors. Typically occurring in the midline, the most common locations for these tumors are the corpus callosum and cerebellopontine angle. Rather than true neoplasms, intracranial lipomas are thought to represent congenital malformations that result from an abnormal persistence of the meninx primitiva, the mesenchymal tis-
sue that gives rise to the meninges, and its subsequent differentiation into adipose tissue. Other theories of their origin include hyperplasia of pial cells, metaplasia of perivascular cells, and metaplasia of pial cells. Rarely, other ectopic mesenchymal tissue, such as striated muscle, bone, and cartilage, may be present.

As in this case, most intracranial lipomas are incidental findings without any associated pathologic conditions; however, such tumors have been reported as part of or associated with several syndromes and congenital malformations. These include encephalocraniocutaneous lipomatosis, epidermal nevus syndrome, Pai syndrome, neurofibromatosis type 1, cortical dysplasia, vascular malformations, and assorted neural tube defects.

Clinically, these tumors usually are asymptomatic, although patients may present with epilepsy or, in the case of tumors located at the cerebellopontine angle, with cocleovestibular symptoms such as dizziness, hearing loss, or tinnitus. Diagnosis is made radiologically, either by computed tomography or magnetic resonance imaging. When necessary, treatment usually consists of anticonvulsant therapy to control seizure activity; the risks of surgical intervention typically outweigh potential benefits.

References

