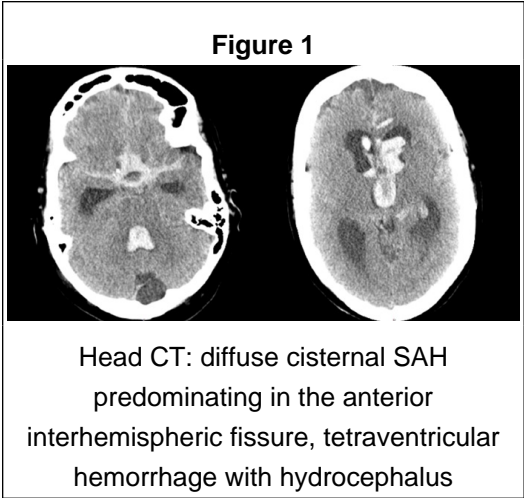


**Introduction**

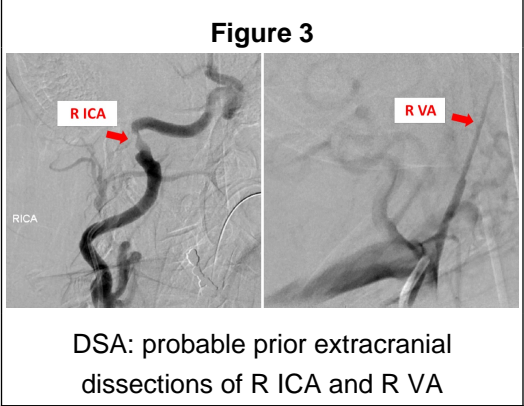
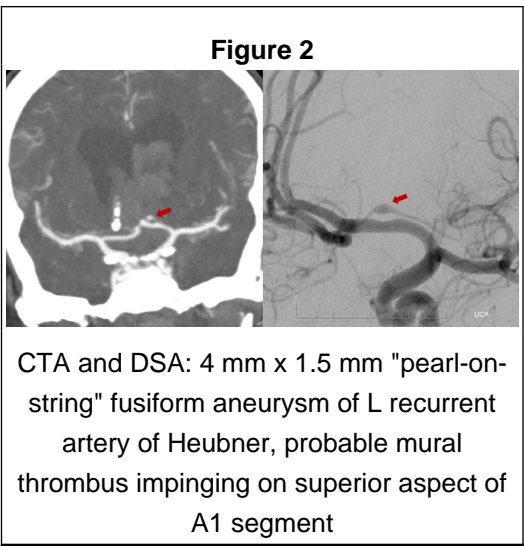
Dissecting aneurysms of the recurrent artery of Heubner (RAH) have not been previously observed. Likewise, intracranial dissections in the setting of osteogenesis imperfecta (OI) are extremely rare.

**Case Report**

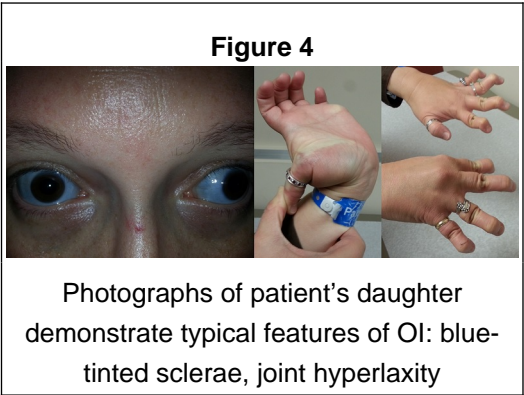
A 50-year old woman with OI type I (autosomal dominant, COL1A2 gene mutation) presented with massive spontaneous subarachnoid (SAH) and intraventricular hemorrhage (IVH), resulting in a state of coma with decorticate posturing (GCS 5, WFNS grade 5), Following CSF diversion, her neurological exam improved slightly (GCS 6T).



The patient exhibited clinical signs of OI, including blue-tinted sclerae, joint hyperlaxity, and finger deformities secondary to multiple prior healed fractures. Interestingly, her mother had died of aneurysmal SAH and one of her maternal aunts had undergone surgical clipping of an intracranial aneurysm.



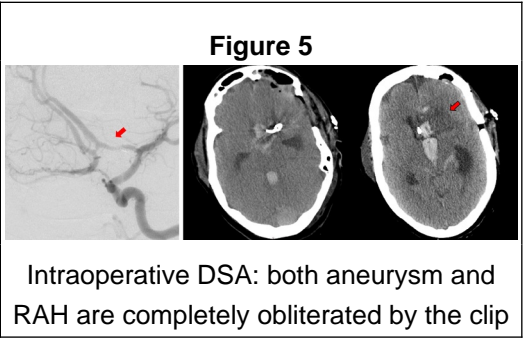
Given the location and configuration of the aneurysm, decision was made to surgically explore and attempt clip reconstruction of the RAH.



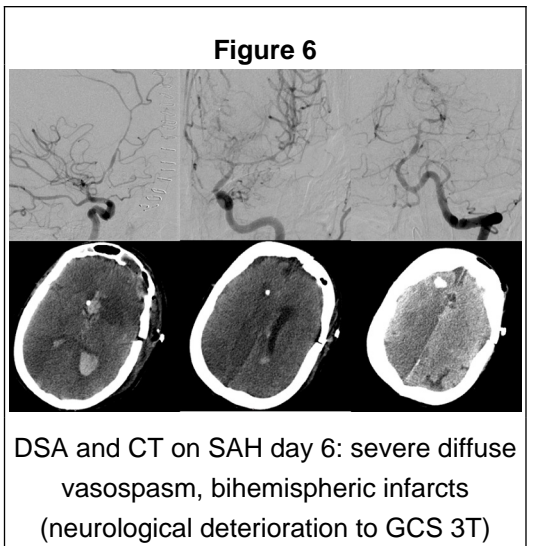
Under continuous intraoperative MEP monitoring, the aneurysm was exposed via a standard left pterional transsylvian approach.



Although patency of the RAH could not be preserved, intraoperative MEPs remained normal. Therefore, aneurysm clips were not repositioned.



Postoperatively, her neurological condition was unchanged from baseline, with a persistently symmetric motor exam. Head CT showed expected small infarct in head of L caudate nucleus head without involvement of internal capsule.



Given her poor prognosis, medical care was withdrawn at the family's request and the patient ultimately died.

**Conclusions**

Although rare, intracranial dissections can occur in the setting of OI and can lead to devastating intracranial hemorrhage. Dissecting aneurysms in patients with OI may occur in atypical locations and have a predilection for smaller and more distal arteries, such as the RAH. Management of such aneurysms is particularly challenging and preservation of the parent vessel is often impossible. Intraoperative angiography and neurophysiological monitoring can provide very useful feedback in this setting.

**References**

1. Khandanpour et al. Radiographics 2012;32:2101-12.
2. Matouk et al. Interv Neuroradiol 2011;17:371-5.
3. Rauch and Glorieux. Lancet 363:1377-85.
4. Uhl et al. Acta Neurochir (Wien) 2003;145:1073-84.
5. Yonekawa et al. Acta Neurochir Suppl 2008;103:61-9.