Hemangioblastoma of the Medullary: Forty-Seven Cases Reports

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Purpose
Hemangioblastomas of the medulla are rare and seldom reported. We present imaging experiences of them.

Materials & Methods
Forty-seven cases of hemangioblastoma with imaging diagnosis (MR imaging and DSA) and microsurgical treatment from 1987 to 2001 were analyzed retrospectively.

Results
There are 39 cases with a solitary medullary hemangioblastoma and eight cases with multiple hemangioblastomas. The tumors distributed in three anatomical areas: pontomedullary, medullary, and cervio medullary. They were located intramedullary or dorsal exophytic. Their MR appearance consists of tumor nodules and focally expanding the medulla, very frequently however, associated with extensive and large cysts. There were cyst formations in 97.4% of the single hemangioblastoma—predominantly cystic or predominantly solid. The signal characteristics of both nodule and cysts are not very different from astrocytomas. However, a vascular nature of the tumor may be suspected because of the presence of serpiginous structures with signal voids, representing vessels with flowing blood. The mural nodule demonstrates striking enhancement. The cyst and its walls do not enhance. The purely solid hemangioblastomas also demonstrate strong enhancement. The major feeding arteries and the tumor's brush can be revealed on DSA, even MRA. On angiographic examination a vascular nodule amidst an avascular mass, usually with serpentine vessels, may be identified with or without draining veins. All of the hemangioblastomas of the medulla were radically excised.

Conclusion
Preoperative diagnosis is possible with MR imaging, and vessel topography can be elucidated by angiography. Surgical strategy is en bloc excision, not piecemeal resection. Small solid or cystic tumor can be excised safely, but the removal of a large solid such tumor may lead to a dangerous condition as a result of postoperative edema or/and hemorrhage in the medulla affecting the respiratory and vagus centers. To prevent this, a preoperative embolization of the PICA is suggested.
References