SATCHEMO and Beyond: An Extended Differential Diagnosis of Sellar/Parasellar Lesions

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Purpose
To expand the differential of sellar/parasellar masses encompassing more exotic lesions not usually considered under “SATCHEMO.” We also demonstrate how some entities can have a deceptive appearance.

Materials & Methods
The authors retrospectively reviewed the distinguishing imaging characteristics (CT, MR imaging/angiography, angiography, spectroscopy, and conventional radiography) of illustrative sellar/parasellar cases at two major teaching institutions over a 6-year period. We categorized pathologies by location and structure of origin, as well as by consideration of whether the lesion was cystic or solid in appearance.

Results
Cystic lesions included arachnoid cyst, the racemose form of neurocisticercosis, Rathke’s cleft cyst, dermoid, and craniopharyngioma. Aneurysms and macroadenomas (apoplexy) also may have a cystic appearance. Large craniopharyngiomas and epidermoids may be difficult to distinguish, since they can extend across the suprasellar, cerebellopontine angle, and prepontine cisterns. Macroadenomas may have an aggressive behavior, invading and destroying the skull base, resembling chordomas, or extending to the cavernous sinus. In addition to the common infundibular lesions, we present several unusual cases. Furthermore, two other suprasellar lesions, astrocytoma and hypothalamic hamartoblastoma (part of Pallister-Hall syndrome), are considered.

Conclusion
“SATCHEMO” encompasses most of the sellar/suprasellar entities. It is important, however, for the radiologist to be familiar with uncommon lesions as well as unusual presentations of common lesions, for the management and prognosis differs.