Tolosa-Hunt syndrome: MR imaging features in 15 patients with 20 episodes of painful ophthalmoplegia

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PURPOSE
(a) To assess MR features in patients with Tolosa-Hunt syndrome (THS) and to (b) correlate MR findings with criteria derived from previously reported pathologic observations.

METHODS
Fifteen patients with twenty episodes of painful ophthalmoplegia prospectively selected according to International Headache Society (IHS) standards underwent MR examinations focused on the cavernous sinus. Initial examinations in 20 and follow-up MR images in 17 episodes were retrospectively reviewed by 3 independent observers.

RESULTS
The primary criteria: an enhancing soft tissue lesion within the cavernous sinus, increase in size and lateral bulging of the anterior cavernous sinus contour were consistently present in 15 initial episodes and in 5 recurrences (20/20). Agreement among observers was 100%. The secondary criteria: internal carotid artery narrowing in 7 patients, extension towards the superior orbital fissure in 13 and orbital apex involvement in 8 patients were unanimously agreed upon in 87.5%, 86.6% and 80%. Complete resolution of findings was observed on follow-up studies.

CONCLUSION
In patients with THS the MR features conform to previously reported pathologic findings. MR features are evocative of THS when an increase in size and bulging of the dural contour of the anterior CS supplemented by carotid artery involvement and extension towards the orbit are present. Resolution of findings within 6 months is required to support the diagnosis.

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