Aneurysm of the internal carotid artery with bone arrosion and extradural compression of the optic nerve

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Figure 1 CT angiography (A and B axial, C and D coronal MIP) demonstrating an extradural aneurysm of the right internal carotid artery, engulfing the optic nerve (→) by bony arrosion and expansion into the sphenoid sinus including the clinoid process

A 47-year-old man presented with a 10-year history of progressive painless vision loss in the right eye. Ophthalmologic examination revealed that only minimal light perception of the right eye was preserved and that light reaction could no longer be elicited. The exophthalmometry showed proptosis of the right eye. The right optic disc appeared pale and atrophic. CT and MRI revealed a large and broad-based extradural aneurysm of the right internal carotid artery with arrosion and expansion of the skull base and circumferential compression of the optic nerve as cause of the vision loss (figure 1), which was occluded successfully (figure 2). This case illustrates that extradural aneurysms can not only compress extradural structures, but may also affect intradural structures by means of bony arrosion and dural engulfment.

Figure 2 Angiogram before (A) and after (B) treatment with 2 flow diverters (Pipeline) and additional coils (→ optic nerve)

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