Tethered brain

Case illustration

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This 33-year-old man was evaluated for visual impairment in 1997 and was found to have a pituitary macroadenoma. Subtotal tumor excision (Fig. 1A) and subsequent radiation therapy relieved his symptoms. He noted worsening of his vision 1 year later, but his condition remained unchanged in the subsequent period. When we saw him for the first time 2.5 years postsurgery, his vision was 20/50 in the right eye and 20/30 in the left; color vision was impaired bilaterally. He had bitemporal hemianopsia, optic atrophy on the right side, and temporal pallor of the left optic disc. Magnetic resonance (MR) imaging revealed protrusion of the suprasellar cistern into the enlarged sella turcica (Fig. 1B). The residual pituitary gland was thinned with no evidence of tumor (Fig. 1B–D). The optic chiasm and adjacent segments of optic nerves and tracts were tethered within the sella turcica. The herniation of both gyri recti into the sella turcica was remarkable (Fig. 1B and D).

Because there was no progression of his symptoms during the last 18 months, surgical treatment was not recommended. The findings were thought to be compatible with secondary empty sella turcica. The diaphragma sellae may become weak due to tumor compression, perioperative mechanical injury, and the effects of radiation.1–4 The late onset of visual symptoms without tumor recurrence led us to believe that radiation therapy was responsible for the herniation in our case. Although herniation of the suprasellar visual system into primary or secondary empty sella turcica has been reported before, to our knowledge this is the first case in which herniation of the gyri recti into the sella turcica has been demonstrated.1–4

References

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