Sellar spine associated with endocrine and neuro-ophthalmological manifestations

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ABSTRACT. A case of sellar spine, associated with neuro-ophthalmological and endocrine abnormalities, is reported. The case described is a rare malformation, of which the authors found only six cases in the literature.

Key words: sellar spine; sella turcica; pituitary gland; CT scan; papilloedema; morbid obesity

INTRODUCTION

The first description of a case of sellar spine was given by Lang (1977): a bony intrasellar spine growing in the midline of the inferior portion of the anterior aspect of the dorsum sellae, in antero-superior direction. Its dimensions were reported as mean length 4 mm and mean diameter 1 mm. It is in general conically shaped with its tip pointing to the diaphragma sellae.

X-ray examination of the skull on frontal and lateral views may demonstrate this bony malformation, but the best conventional examination is sellar spine tomography.

Dietemann (1983) reported the first CT scan examination.

CASE REPORT

A 40-year-old white man was followed-up for endocrine symptoms. At the age of 25 he began to gain weight, reaching a weight of 130 kg at the time of writing this report (Fig. 1).

X-ray examination of the skull showed a bony process attached with a large base to the midline; at the other end it reached almost the diaphragma sellae (Fig. 2). Axial and coronal sections of a contrast enhanced CT scan confirmed the anomaly (Figs. 3 and 4).

Hormonal analysis revealed a partial hypopituitarism with no reaction of gonadotropins and thyrotropins to the releasing factors.

The neuro-ophthalmological examination showed: visual acuity RE 9/10, LE 10/10. Bilateral papilloedema was found (Fig. 5).

Fluorescein angiography disclosed bilateral optic atrophy. Bilateral visual field contraction was noted mainly in the temporal quadrants.

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Fig. 1. The patient.

Fig. 2. Cranial X-ray showing the bony process.

Figs. 3+4. Axial and coronal CT scans.

DISCUSSION

The pathogenesis of sellar spine is still unknown. Several hypotheses have been posed: ossified vascular channel, calcified notochordal remnants?

The earlier papers on sellar spine did not mention endocrine or neuro-ophthalmological abnormalities. The first finding of such a sellar spine is reported here.

Fig. 5. Bilateral papilloedema.

REFERENCES

- BONNEVILLE, J. F. & DIETEMANN, J. L.: *Radiology of the Sellar Spine*. Springer, Berlin/ Heidelberg/ New York 1981
- DIETEMANN, J. L., LANG, J., FRANCKE, J. P., BONNEVILLE, J. F., CLARISSE, J. & WACKENHEIM, A.: Anatomy and radiology of the sellar spine. *Neuroradiology* 21: 5-7, 1981
- DIETEMANN, J. L., BONNEVILLE, J. F., CATTIN, F. & POULIGNOT, D.: Computed tomography of the sellar spine. *Neuroradiology* 24: 173-174, 1983
- LANG, J.: Structure and postnatal organization of heretofore uninvestigated and infrequent ossification of the sellar region. *Acta anat. (Basel)* 99: 121-139, 1977