Primary empty sella syndrome and benign intracranial hypertension

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Abstract. The combination of the empty sella syndrome (ESS) and benign intracranial hypertension (BIH) is illustrated by two case histories. The causal relationship between the ESS and the BIH can be explained by two mechanisms. Raised intracranial pressure could produce a herniation of the subarachnoid cistern into the sella turcica, if the diaphragma sellae is incomplete. Alternatively an infarction in a pituitary adenoma could result in both an ESS and cerebrospinal fluid flow obstruction, which could lead to BIH.

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The empty sella syndrome (ESS) and benign intracranial hypertension (BIH) are both well known entities. In the ESS the diaphragma sellae is incomplete, allowing the subarachnoid space to herniate into the sella turcica and compress the pituitary gland (Busch, 1951). When there is no history of surgery or irradiation of the sellar region the ESS is called primary. BIH is a syndrome with raised cerebrospinal fluid (CSF) pressure not due to a space occupying lesion, and with a normal CSF and ventricular system (Bulens et al., 1979). The ESS and BIH occur together quite frequently (Table 1). The following case histories will illustrate this combination.

Patients

Case 1

A 40-year-old man had a 2-month history of headache and dizziness. Visual acuity was 20/25 in the right eye and 20/20 in the left eye. Except for enlarged blind spots, visual fields were normal (Figure 1). Funduscopy revealed chronic papilloedema: 4D in the right eye and 5D in the left eye. Neurologic examination was normal. No intracranial space occupying lesion was found, but computed tomography (CT) of the brain showed an empty sella (Figure 2), which was confirmed by CT cisternography. A full endocrine
Figure 1. Case 1. In both visual fields the blind spots are enlarged.