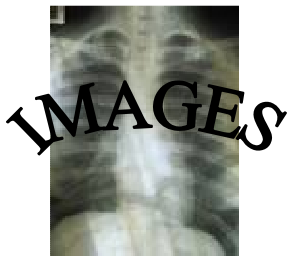

Simultaneous Bilateral Subdural Hygromas, Arachnoid Cyst, and Empty Sella Syndrome in a 66 Year-Old Female

Nathan Tofteland, M.D.
Justin Moore, M.D.
University of Kansas School of Medicine-Wichita
Department of Internal Medicine

We present the only known case report of simultaneous bilateral subdural hygromas, arachnoid cyst, and empty sella syndrome.

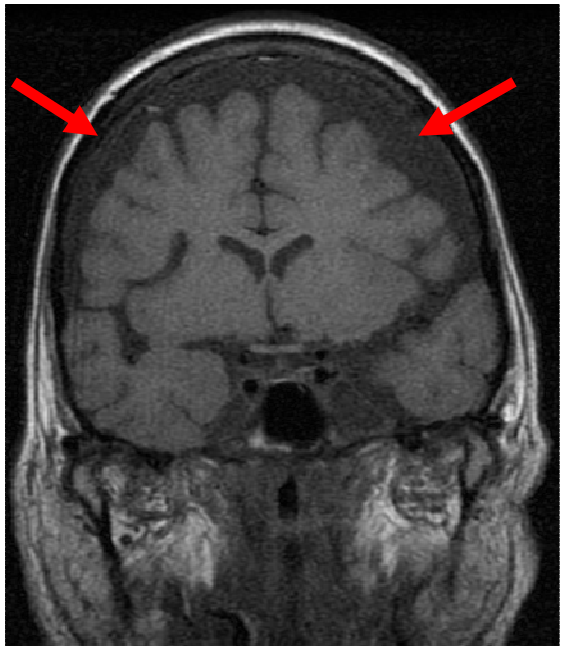

Figure 1. Bilateral subdural hygromas.

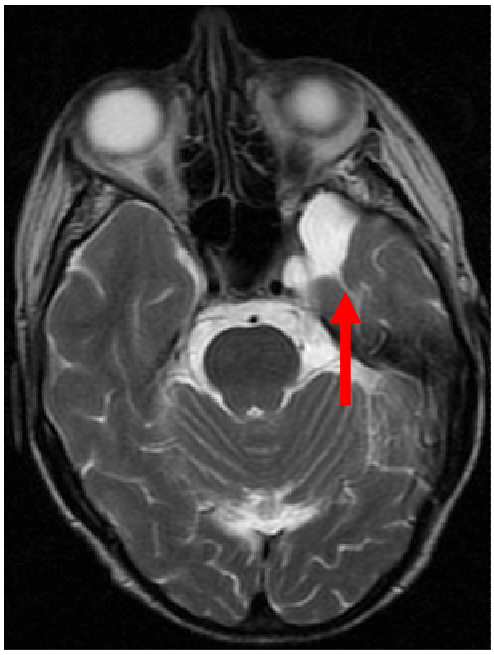

Figure 2. Left temporal lobe arachnoid cyst.

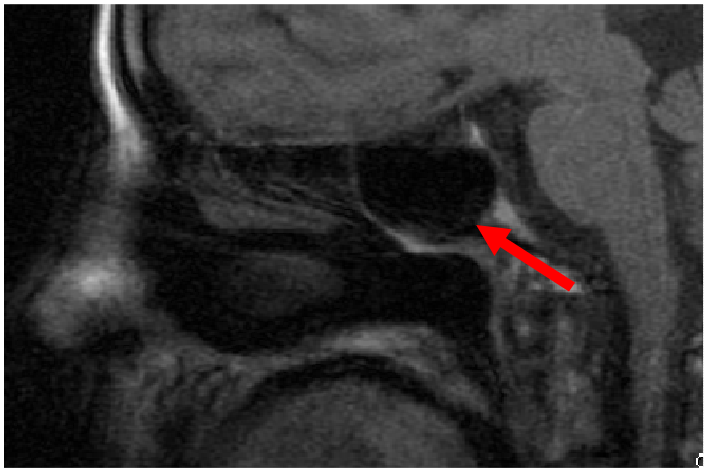

Figure 3. Empty sella turcica.

A 66-year-old female presented to the emergency department for evaluation of syncopal episodes and altered level of consciousness. Magnetic resonance imaging (MRI) of the brain revealed bilateral subdural hygromas (Figure 1), a left temporal lobe arachnoid cyst (Figure 2), and an empty sella turcica (Figure 3). The patient and family were unable to give any prior history of significant head trauma. An electroencephalogram was unremarkable and a neurology consultation did not reveal seizure activity.

Despite a relatively normal hormonal history, with normal menses until age 50 and only mild primary hypothyroidism prior to her hospitalization, laboratory evaluation revealed hypoglycemia, secondary adrenal insufficiency, probable secondary hypothyroidism (she was on thyroid hormone replacement), hypoprolactinemia, growth hormone deficiency, and secondary hypogonadism (characterized by a failure of the follicle-stimulating hormone level to rise appropriately in the postmenopausal state). Diabetes insipidus was not present. She was managed conservatively with fluids, glucocorticoid replacement, and thyroid hormone replacement. Cardiac monitoring was unremarkable and her hypoglycemia resolved with glucocorticoid replacement. She was discharged to home in her baseline state of health.

Arachnoid cysts are cerebrospinal fluid (CSF) filled collections between two arachnoid layers accounting for one percent of all intracranial space-occupying lesions. They are thought to be congenital and microscopically formed by mesothelial cells.[1] Subdural hygromas are collections of CSF in the subdural space. Rarely, subdural hygromas may be a consequence of ruptured arachnoid cysts.[2] Other etiologies are controversial, but most subdural hygromas are thought to be derived from chronic subdural hematomas. Other possible etiologies include a sudden decrease in pressure by ventricular shunting, severe brain atrophy, head trauma, dehydration in the elderly, lymphoma, and connective tissue diseases. Differentiation of subdural hygroma from subdural hematoma on imaging can be difficult and gadolinium-enhanced MRI is the imaging modality of choice.[3]

Empty sella syndrome is divided broadly into primary empty sella, a congenital defect caused by downward herniation of the sellar diaphragm, or secondary empty sella, in which the pituitary is displaced or destroyed by an acquired disease process, surgery, or radiation. Primary empty sella rarely is accompanied by hormonal dysfunction, although hyperprolactinemia may be present in 15% of cases. The majority of patients with secondary empty sella have endocrine disturbances.[4] This patient's normal menarche and regular menses until the normal age of menopause followed by profound endocrine disturbances make secondary empty sella much more likely than primary.

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