Non-traumatic cerebrospinal fluid rhinorrhea associated with hydrocephalus: A case report. [Japanese]

Authors: Tokuno T., Ban S., Nakazawa K., Yoshida S., Matsumoto S., Shingu T., Sato S., Yamamoto T.

Publication Date: 1995

Abstract:

We report an unusual case of non-traumatic cerebrospinal fluid rhinorrhea associated with aqueductal stenosis and hydrocephalus. The patient was a 10-year-old girl who suddenly developed massive CSF rhinorrhea following severe edema of the left side of her face. CT scan showed marked dilatation of the lateral and third ventricles and enlarged sphenoid sinus of water density, extending to the lateral wall of the left orbit and to the left pterygoid fossa. Immediately after the onset of CSF rhinorrhea, ventricular drainage was performed, but the rhinorrhea persisted. Ventriculography revealed predominant flow of the contrast medium into the left temporal horn and abnormal collection in the sphenoid sinus. Coronal CT scan did not show any focal bony defect, but a thin layer was seen in the base of the left middle fossa. Exploration of the skull base in the left middle fossa was performed through a left frontotemporal craniotomy. An irregular bony defect measuring 7 x 12 mm was then found in the anterolateral floor of the middle fossa and the dura was also perforated there. Brain tissue including the temporal horn protruded through the bony defect into the sphenoid sinus. After excision of the herniated brain tissue, repair was accomplished by packing muscle into the bony defect and covering the dural defect with fat reinforced by coating with fibrin glue. Postoperatively, the CSF rhinorrhea has stopped and the edema of her face has disappeared. We discuss the etiology of this unusual spontaneous CSF leakage through the middle fossa and the abnormally enlarged sphenoid sinus.