Tension pneumocephalus after chronic subdural hematoma evacuation

The occurrence of postoperative pneumocephalus is a common event in chronic subdural hematoma after evacuation and is often trivial. When the intracranial air volume is significant, it creates intracranial hypertension causing tension pneumocephalus. The attending physicians should be aware of the possibility of occurrence of such complication. Treatment and prevention of pneumocephalus should also be well known by the medical staff.

The risk of tension pneumocephalus developing after the evacuation of a chronic subdural hematoma has been cited as 2.5%

Case series

The computerized tomography (CT) findings were analyzed in five cases of subdural tension pneumocephalus following surgery for chronic subdural hematoma. They were compared with CT scans in 14 cases of asymptomatic subdural pneumocephalus. In this study, two new CT findings were identified that suggest increased tension of the subdural air. Subdural air separates and compresses the frontal lobes, creating a widened interhemispheric space between the tips of the frontal lobes that mimics the silhouette of Mt. Fuji. The presence of air between the frontal tips associated with massive air inclusion over the frontal lobes presumably indicates increased tension of the subdural air. The “Mt. Fuji sign” was seen in four of the five cases with subdural tension pneumocephalus. The other finding was the presence of multiple small air bubbles scattered through several cisterns (“air bubble sign”). It is postulated that these air bubbles enter the subarachnoid space through a tear in the arachnoid membrane caused by increased tension of air in the subdural space. This finding was seen in four cases with subdural tension pneumocephalus. These two CT findings are helpful in making a diagnosis of subdural tension pneumocephalus following surgery for chronic subdural hematoma.

Case reports

1985

After burr hole evacuation of bilateral chronic subdural hematomas. Subsequent treatment was effected with combined twist drill closed system drainage and continuous intrathecal infusion of a physiological solution. The clinical entity, tension pneumocephalus, and the use of continuous subarachnoid infusion and drainage as a method of cerebral reexpansion are discussed.


4) Caron JL, Worthington C, Bertrand G. Tension pneumocephalus after evacuation of chronic subdural hematoma and subsequent treatment with continuous lumbar subarachnoid infusion and craniostomy.