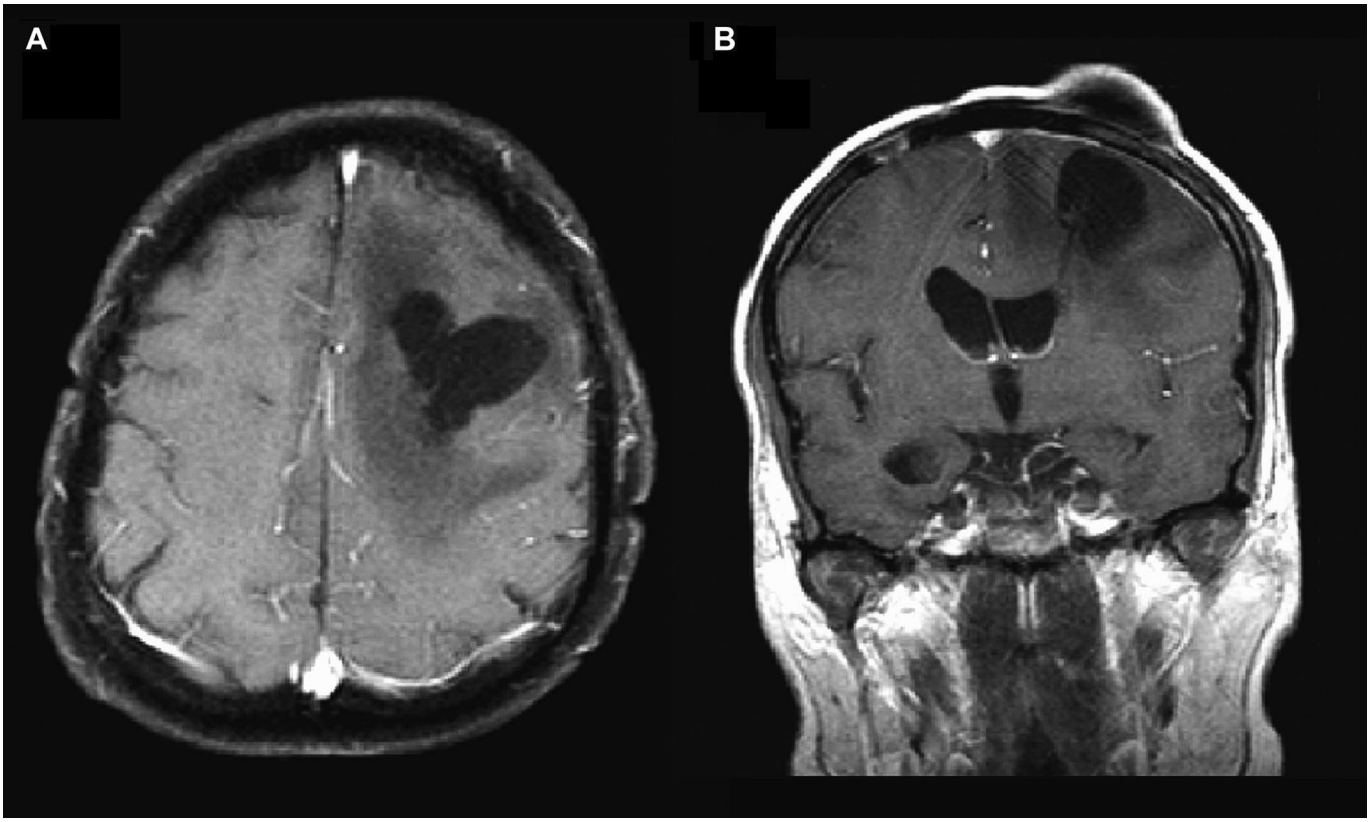

Figure. (A) T1-weighted axial MR image with contrast demonstrates a nonenhancing left frontal cystic cavity surrounding the intraventricular catheter with marked surrounding edema. (B) T1-weighted coronal MR image with contrast again depicts the cystic cavity with mass effect. Note the Ommaya reservoir placement and lumen of the intraventricular catheter traversing the cystic cavity.

Methotrexate-induced encephaloclastic cyst: A complication of intraventricular chemotherapy

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A 36-year-old man with acute lymphoblastic leukemia developed recurrence treated with busulfan and fludarabine followed by transplantation.

Disease recurred as leukemic meningitis for which an Ommaya reservoir was placed. Following his sixth intraventricular methotrexate treatment, the patient developed acute confusion and a right hemiparesis. Cranial MR (figure) revealed an encephaloclastic cyst as a complication of intraventricular chemotherapy with methotrexate via an Ommaya reservoir.

The reservoir was removed and the cyst contents revealed by histopathology an inflammatory admixture of lymphocytes and macrophages. Cyst contents were bacteriologically sterile and the cyst was negative for malignancy. Subsequently, the patient made a complete neurologic recovery.

Ommaya reservoirs are frequently used to deliver intraventricular chemotherapy in cancer patients with leptomeningeal metastases.[1] Methotrexate-induced encephaloclastic cyst is an infrequently described complication of intraventricular chemotherapy among other complications such as aseptic (chemical) meningitis and catheter-related infections.[2] Etiopathogenesis is presumed to be due to retrograde flow along the catheter tract of the intended intraventricular chemotherapeutic.

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