E-Poster

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Ex-vacuo Dilatation, an Atypical Presentation of Post-trephine Syndrome

Topic: Health conditions (nervous system, musculoskeletal system, cardiopulmonary system)

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BACKGROUND

Post-trephine syndrome (PTS) is a recognized complication following trephination or craniotomy. Patients experience neurological symptoms due to alterations in intracranial pressure and structural changes after surgery, usually reversed after cranioplasty. Ex-vacuo dilatation, characterized by ventricular enlargement secondary to brain atrophy, is a rare and atypical manifestation of PTS. Due to similar imaging findings, it is frequently misdiagnosed as hydrocephalus, but it differs in pathophysiology and clinical presentation.

CASE DESCRIPTION

We report a case of a 40-year-old lady who underwent craniotomy for the removal of subdural empyema. Postoperatively, she exhibited neurological deterioration, including cognitive decline, and motor deficits. Neuroimaging revealed ventriculomegaly that initially suggested hydrocephalus. However, subsequent evaluations identified ex-vacuo dilatation as the true cause of the observed ventriculomegaly, with evidence of brain volume loss rather than cerebrospinal fluid (CSF) accumulation. After cranioplasty, she showed improvement both clinically and radiologically.

DISCUSSION

Ex-vacuo dilatation, in the context of PTS, occurs when brain tissue undergoes atrophy following surgery, leading to compensatory enlargement of the ventricular system. This is distinct from true hydrocephalus, where there is an excess accumulation of CSF. The diagnostic challenge arises from the similarity in imaging findings, but clinical symptoms and careful imaging interpretation, including the assessment of brain parenchyma, allow differentiation. This atypical presentation may not be immediately recognized as a post-surgical complication, delaying treatment and potentially leading to poor outcomes if mismanaged.

CONCLUSION

Ex-vacuo dilatation represents an unusual but important consideration in the post-trephine syndrome spectrum. Awareness of this atypical presentation is crucial for clinicians to differentiate it from other causes of ventriculomegaly. Accurate diagnosis through imaging and clinical correlation can help guide appropriate management, avoid unnecessary interventions, and improve patient outcomes.

Statement of Disclosures

None

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