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Headache Due to Spontaneous Rupture of Dermoid Cyst in the Postoperative Period

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Introduction:

We report a case of a ruptured dermoid cyst causing dissemination of lipid droplets within the subarachnoid space. Dermoid cysts represent 0.04-0.6% of all intracranial tumors. This condition has low mortality, but significant morbidity given the various complications.

Case presentation:

A 62-year-old gentleman with past medical history including lumbosacral herniated nucleolus pulposus with previous L5-S1 discectomy three years prior, presented to the hospital for an L5-S1 revision discectomy with fusion. After discharge, he developed a sudden intense circumferential headache that was 8 out of 10 associated with phonophobia. Lumbosacral spine computer tomography (CT) scan demonstrated a superficial fluid collection. The following day he underwent incision and drainage with negative fluid culture analysis. Brain CT and Magnetic Resonance Imaging (MRI) demonstrated multiple foci within the cerebrospinal fluid with enhancement on diffusion weighted imaging and T2, consistent with lipid accumulation without any identifiable cystic lesions. Patient was diagnosed with rupture of an intracranial dermoid cyst. Conservative management with analgesics, opioids and non-steroidal anti-inflammatory drugs resulted in pain improvement.

Discussion:

Dermoid cysts are a subtype of site-specific cysts that can be located in various organs including the reproductive, skin, or nervous system, and can contain a variety of tissues including hair, fat, nails, cartilage, and bone. Rupture of an intracranial dermoid cyst is a rare, usually spontaneous complication, which presents with headache, seizure, or mass effect. MRI shows T2 high signal intensity due to high-fat content. Treatment is usually conservative management but could require surgical intervention.

