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IMAGES IN EMERGENCY MEDICINE

Ultrasound

Woman with growing scalp mass

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1 | CASE

A 77-year-old woman presented to the emergency department with a growing lump on her scalp. The mass was present for a year and she was told it was benign; however, over the last few days, it had markedly increased. Examination revealed a tender, fluctuant mass but hair but appreciated on palpation. Point-of-care ultrasound (PoCUS) demonstrated a structure with mixed echogenicity extending through the skull and compressing what appeared to be brain gyri (Figures 1 and 2). Computed tomography (CT) confirmed that a large mass eroded through the scalp and exerted pressure on the brain parenchyma (Figures 3 and 4).

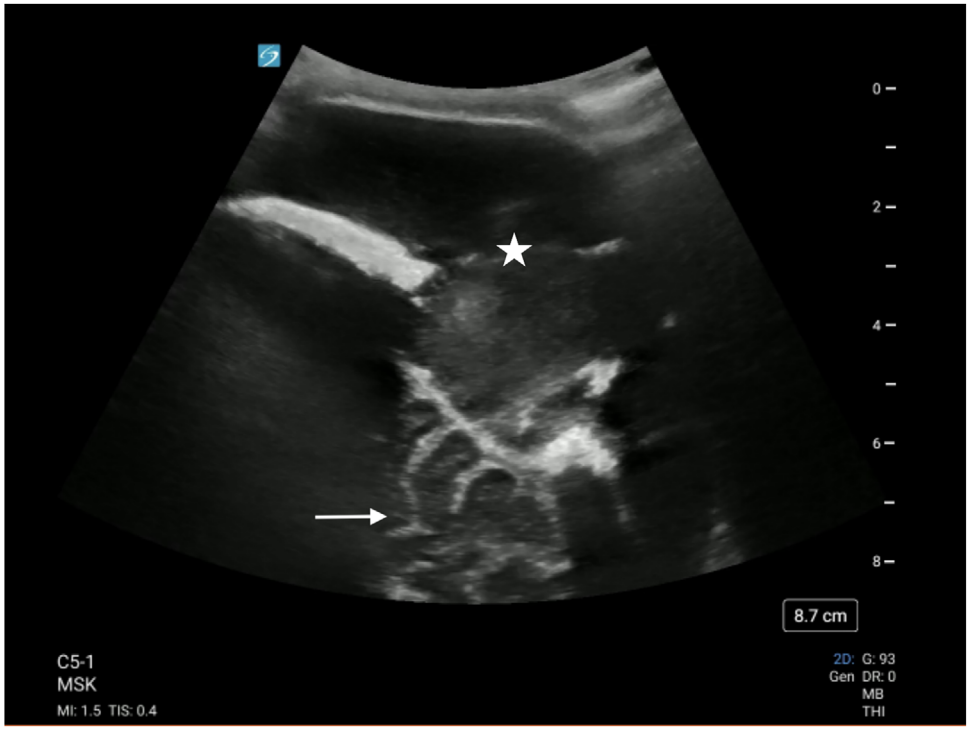

FIGURE 1 Ultrasound image soft-tissue mass on scalp (*) and brain gyri (arrow).
normal-appearing skin on the right parietal scalp, partially obscured by

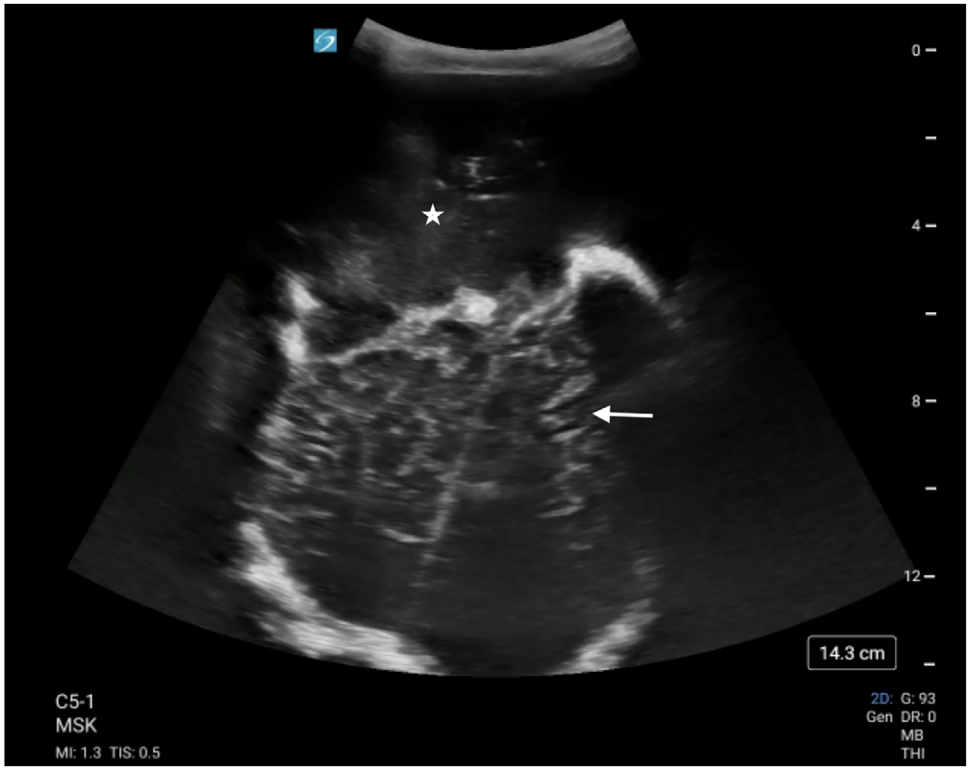

FIGURE 2 Ultrasound image of soft-tissue mass on scalp (*) and brain gyri (arrow).

FIGURE 3 Computed tomography of the head showing a large soft-tissue mass (*) eroding through the skull and compressing the parietal parenchyma (arrow).

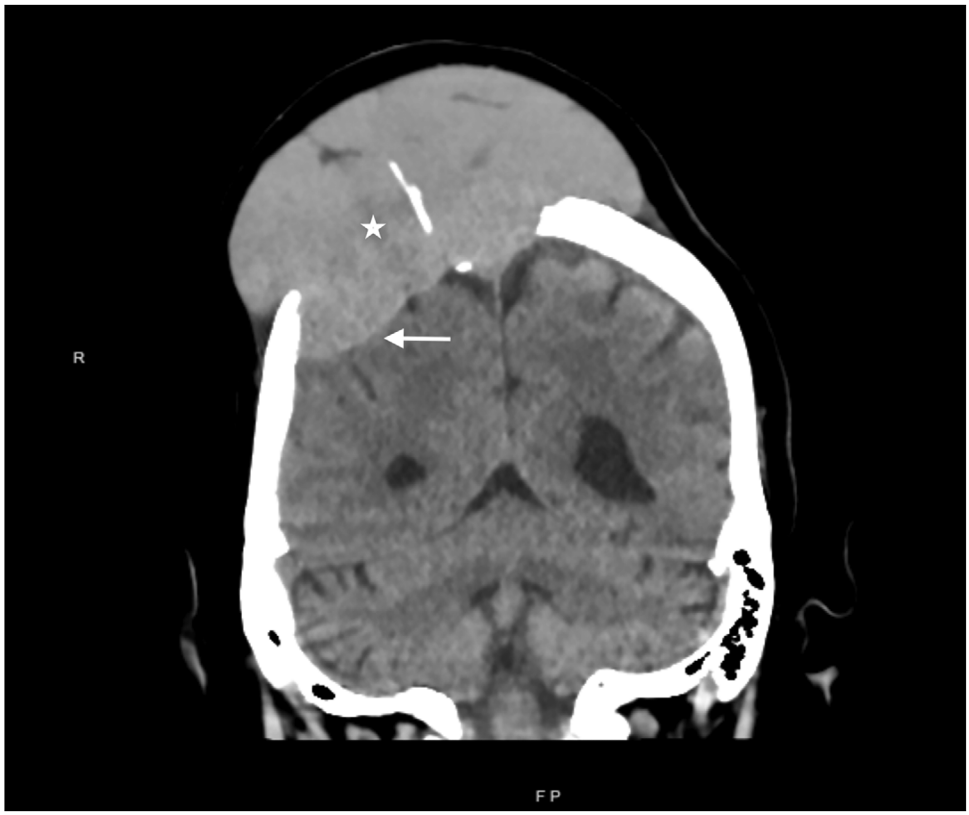

FIGURE 4 Computed tomography of the head showing a large soft-tissue mass (*) eroding through the skull and compressing the parietal parenchyma (arrow).

2 | DIAGNOSIS: DIFFUSE LARGE B-CELL LYMPHOMA

Biopsy confirmed that the mass was diffuse large B-cell lymphoma (DLBCL). DLBCL is the most common subtype of non-Hodgkin lymphoma and often presents with erosive soft-tissue masses.[1] Extranodal sites commonly include the gastrointestinal tract, head and neck, and extremities.[2] Subcutaneous scalp lesions are rare and, as in this case, may be misdiagnosed as benign cystic structures.[3]

PoCUS is an essential diagnostic tool for emergency physicians with validated use in various clinical scenarios. Typical soft-tissue applications include identifying hypoechoic fluid collections concerning for abscess and tissues of other echogenicity, such as cysts or lymph nodes.[4] In this case, PoCUS prompted advanced imaging and resulted in the diagnosis of an advanced-stage soft-tissue lesion with intracranial extension for a mass previously overlooked as benign. Direct application of PoCUS to the evaluation of brain tissue is a topic of interest and further research.[5]

CONFLICT OF INTEREST STATEMENT

The authors declare they have no conflicts of interest.

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