

SHORT COMMUNICATION

A 9-Year-Old Boy With a “Bump on His Head”

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A 9-year-old boy presented to our clinic with a “bump on his head” that has existed since birth. The patient has no known medical conditions and his parents deny any physical trauma or injury that could have resulted in their child’s scalp lesion. The patient does not report any pain, drainage, bleeding, or exudate from the bump and there were no other associated symptoms. On physical examination, a skin-colored nodule was noted on the vertex of the scalp. It measured 2 cm in diameter and demonstrated localized alopecia and mild erythema. (**Figure 1**). The nodule was non-tender and smooth in texture.

Diagnostic findings from an MRI in our patient displayed intracranial extension, confirming the diagnosis of sinus pericranii. (**Figure 2**).

Sinus pericranii is a rare vascular condition of the scalp that is seen in pediatric patients. The disorder may be congenital or acquired after trauma. Sinus pericranii is the result of a venous malformation or abnormal venous communications between the intracranial dural sinuses and the epicranial veins. It has been noted that the sagittal sinus and transverse sinus are two of the common drainage regions. This abnormality in the venous system causes swelling of the scalp, leading to the presenting nodule on the

patient. The nodule is typically asymptomatic and is classically described as a large swollen nodule on the scalp that is non-tender and smooth in texture. In areas where hair growth is present, most cases note localized alopecia. Occasionally patients will complain of associated headaches or nausea, but they do not typically have any other associated symptoms. Due to its appearance and location, it can be confused with a pilar cyst or a scalp hemangioma. Radiologic testing, such as MRI, helps differentiate this disorder from other dermatologic or vascular conditions and confirms the diagnosis of sinus pericranii. Midline skin lesions at sites of neural tube fusion should prompt suspicion for deeper extension. Due to the position of the lesion at the vertex of the patient’s scalp, further examination for deeper extension was needed, and did reveal the underlying connection. Clinicians should be aware of the four sites of spinal fusion (glabella, vertex, occiput, and lumbosacral junction) to ensure that suspicious skin lesions at these locations are appropriately imaged to rule out deeper extension. (**Figure 3**) Although the nodules of sinus pericranii are benign, they are a risk due to the underlying connection with intracranial vessels. Sinus pericranii lesions should be referred to neurosurgeons for repair- their intracranial connection



Figure 1. Two-centimeter nodule with localized alopecia and mild erythema on the patient's posterior scalp.

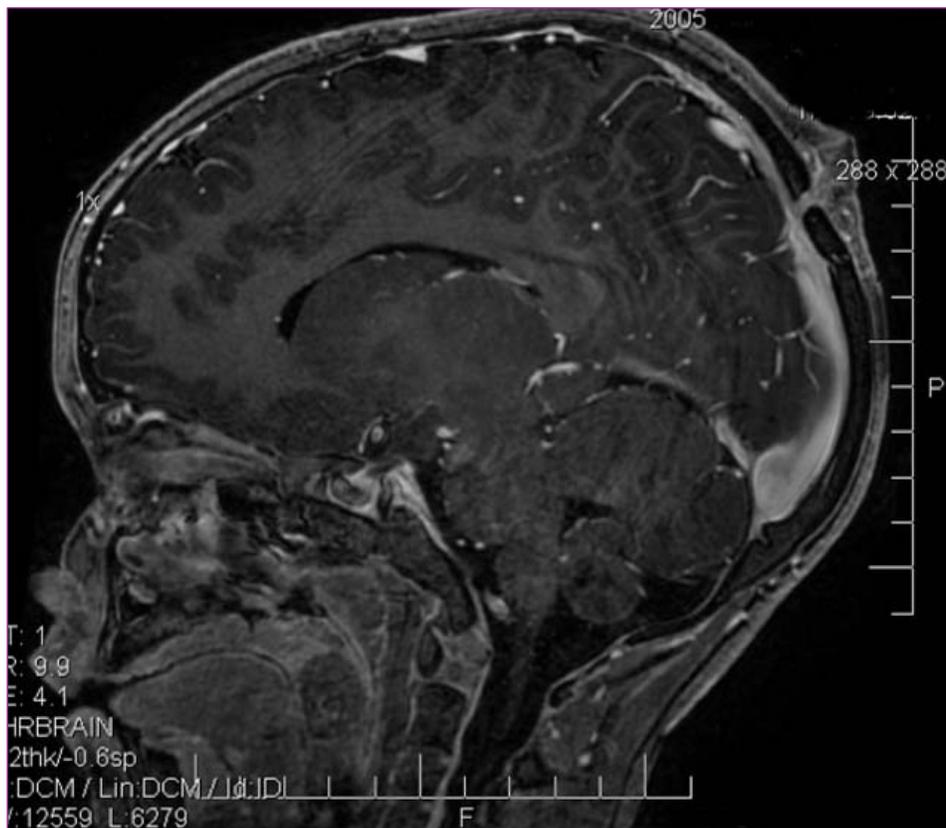


Figure 2. MRI imaging of patient's scalp displaying intracranial extension.

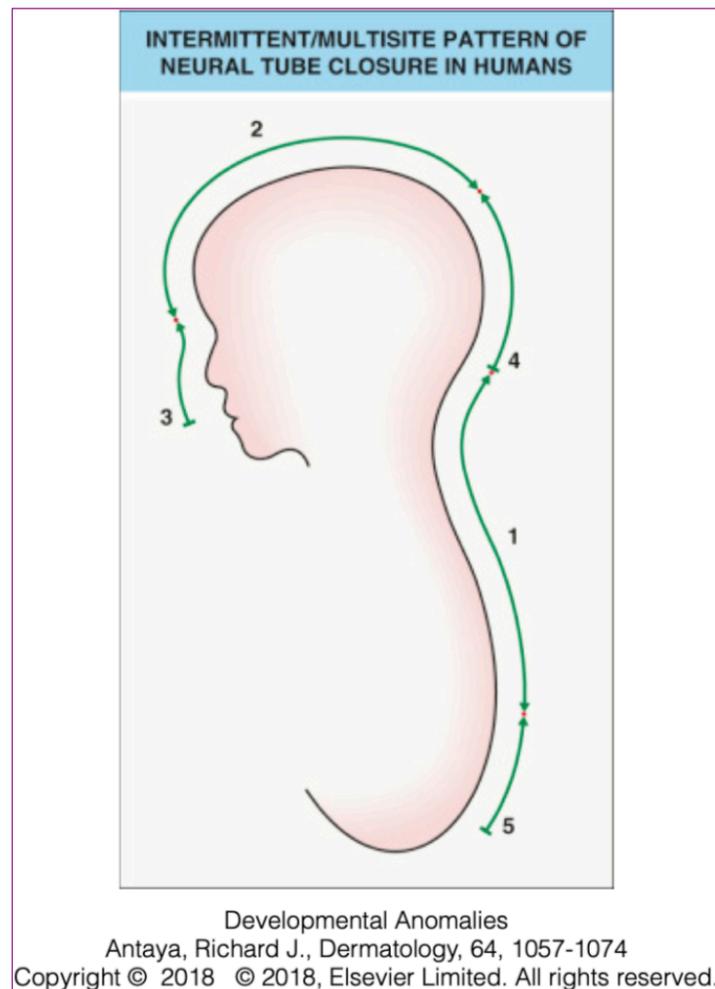


Figure 3. Four sites of spinal fusion: glabella, vertex, occiput, and lumbosacral junction.

increases the risk of catastrophic bleeding if the lesion was accidentally lacerated. This patient was referred to a neurosurgeon for surgical repair of the lesion.

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