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Diastematomyelia

Split Cord Malformation

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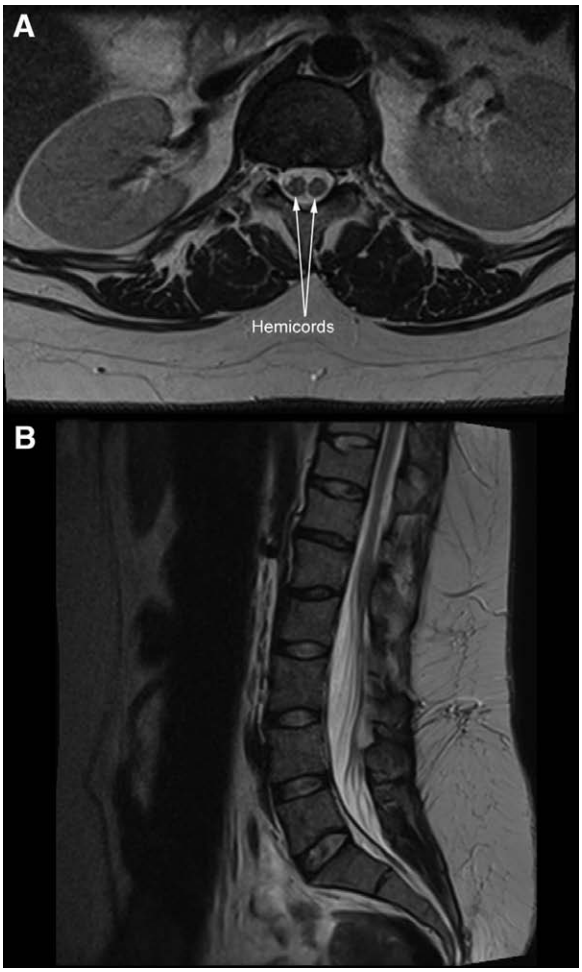

DIASTEMATOMYELIA or split cord malformation is a rare phenomenon that may be discovered on magnetic resonance imaging of the spine. These images are from the case of a 29-yr-old woman with back pain without neurological symptoms. She also had spina bifida occulta. Figure A is an axial T2-weighted image at the T12 level demonstrating diastematomyelia with two hemicords sharing a single dural sac. A mid-sagittal image from the same scan is relatively unremarkable (fig. B).

Diastematomyelia is typically associated with vertebral anomalies.[1] Type 1 involves two hemicords with separate dural sacs and accounts for 40% of cases; it commonly causes neurological symptoms in childhood because of cord tethering. Type 2, seen here, involves the hemicords sharing a single dural sac and accounts for 60% of cases; it is usually asymptomatic.[2] Splitting typically occurs between T9 and S1 but has been reported at cervical levels. There is no correlation between the level of splitting and the neurological symptoms.[2]

Neuraxial anesthesia must be carefully considered. If vertebral anomalies are present, the epidural space may be absent, and attempts to access it may result in dural puncture. There is a case report of successful spinal anesthesia on a parturient with undiagnosed type 2 diastematomyelia, although she did experience a right leg paresthesia during needle placement, as well as a transient left radiculopathy after resolution of the anesthetic.[3] There are no reports of spinal anesthesia in patients with type 1, but the separation of dural sacs may result in a unilateral or unexpected distribution of anesthesia.

Competing Interests

The authors declare no competing interests.

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References

1. Lewandrowski KU, Rachlin JR, Glazer PA: Diastematomyelia presenting as progressive weakness in an adult after spinal fusion for adolescent idiopathic scoliosis. Spine J 2004; 4:116–9
2. Cheng B, Li FT, Lin L: Diastematomyelia: A retrospective review of 138 patients. J Bone Joint Surg Br 2012; 94:365–72
3. Wenger M, Hauswirth CB, Brodhage RP: Undiagnosed adult diastematomyelia associated with neurological symptoms following spinal anaesthesia. Anaesthesia 2001; 56:764–7

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