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Butterfly Vertebrae

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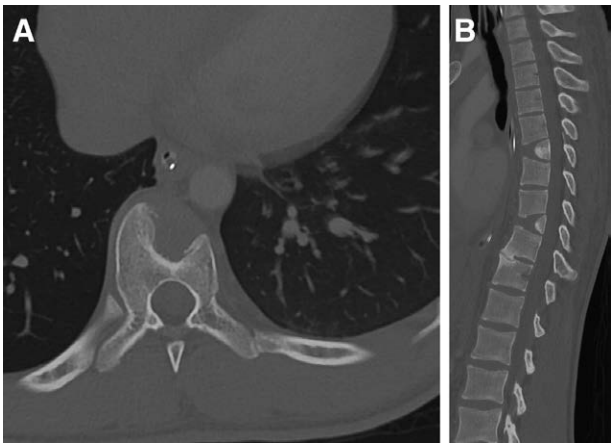

BUTTERFLY vertebrae result from ventral ossification failure of a vertebral body during the third to sixth week of gestation due to persistent remnants of the notochord (Image *A*).[1] The vertebrae and intervertebral disks above and below typically compensate for the defect by elongating about the midline (Image *B*). The defect is often an incidental finding in medical imaging, and may initially be mistaken for metastatic disease or a wedge compression fracture. Butterfly vertebrae typically reside in the thoracic and lumbar regions; cervical butterfly vertebrae are rare, but their existence warrants a thorough airway exam as neck mobility may be limited due to pain or kyphosis.

This skeletal abnormality may be benign; however, it may coexist with other congenital malformations such as those seen with VACTERL association (vertebral defects, anal atresia, cardiac defects, trachea-esophageal fistula, renal anomalies, and limb abnormalities) or other congenital syndromes. Congenital spine defects are frequently associated with cardiac (predominantly atrial and ventricular septal defects) and urogenital abnormalities (renal hypoplasia, horseshoe kidney, or single kidney), and therefore preoperative cardiac and renal assessment may be indicated. Additionally, intraspinal abnormalities, including tethered cord and syrinx, may coincide with vertebral malformations, such as butterfly vertebrae, in over one third of adolescents (37%) with congenital scoliosis.[2] For syndromic or isolated butterfly vertebrae, neuraxial techniques warrant a review of available imaging to ascertain anatomic variation.[3]

Competing Interests

The authors declare no competing interests.

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