Madelung deformity with Vickers ligament

Hee Kyung Kim

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An 11-year-old girl with chronic left wrist deformity and pain underwent MRI evaluation. Coronal intermediate-weighted sequence with fat suppression showed a triangular deformity with medial tilt of the distal radius and proximal migration of the triangular-shaped lunate (Fig. 1). The triangular fibrocartilage complex (TFCC) demonstrated diffuse thickening and oblique orientation (Fig. 1, arrow). These findings are suggestive of Madelung deformity. Sagittal intermediate-weighted sequence with fat suppression showed diffuse thickening of the radiolunate ligament, suggesting Vickers ligament (Fig. 2).

Fig. 1 Coronal image

Fig. 2 Sagittal image

Madelung deformity is a developmental growth disturbance of the distal radius caused by focal dysplasia of the physis with triangular deformity and medial tilt of the distal radius. It is associated with a thickened radiolunate ligament, Vickers ligament, which tethers the lunate and the TFCC to the deformed distal radius [1]. Corrective osteotomy of the radius and release of the thickened radiolunate ligament is performed to treat the deformity and to achieve symptomatic improvement [2].

References

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H. K. Kim (✉)
Department of Radiology, Cincinnati Children's Medical Center,
3333 Burnet Ave.,
Cincinnati, OH 45229, USA
e-mail: Hee.Kim@cchmc.org