The Epiphyseal Spur

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Abstract. A small spur seen at the edge of an open epiphyseal line indicates the presence of an open epiphysis when this is not clear radiographically. In addition, the spur should not be mistaken for an avulsion fracture.

Key words: Normal variant - Epiphyseal development - Simulated fractures.

Epiphyses may demonstrate a variety of unusual patterns during the course of their ossification. The nature of some of these developmental variants are obvious radiographically, but others may be mistaken for pathologic conditions. We have observed a developmental variant which may simulate an avulsion fracture and have termed it the epiphyseal spur. The epiphyseal spur is seen as a hook-like projection from the margin of the epiphysis, usually paralleling the meta-

Fig. 1. Grid film of the proximal end of the humerus in a 16-year-old boy showing epiphyseal and metaphyseal spurs at the lateral edge of the epiphyseal line

Fig. 2A and B. Two examples of epiphyseal spurs at the radial aspect of the distal radial epiphysis in 18- and 20-year-old males which simulate avulsion injuries
The epiphyseal spur is seen in childhood and adolescence and may be mistaken for a metaphyseal avulsion. In addition, it serves as a useful marker to indicate that one is observing a closing epiphyseal line, rather than a fracture.

We have seen the epiphyseal spur in the upper and lower extremities. Figure 1 shows both an epiphyseal and adjacent metaphyseal spur at the lateral edge of the proximal humeral epiphyseal line in a 16-year-old boy. Figure 2 illustrates two examples of epiphyseal spur associated with an accessory ossification center at the distal end of the first metacarpal and a spur at its medial margin, mistaken for a fracture.