

## Commentary

Kümmell's disease (KD) is an old concept which is gaining increased recognition. In the 1890s Hermann Kümmell described a condition of delayed, angular kyphosis following a trivial trauma. It was not until the advent of routinely obtained x-rays when delayed vertebral body collapse could be proven that this diagnosis was felt to be valid.<sup>[1]</sup> However, KD languished for about 40 years before being revived in the 1980s.<sup>[2]</sup>

KD is delayed, posttraumatic vertebral body collapse (VBC). The VBC occurs after a "trivial" trauma with an "asymptomatic" period between the trauma and VBC.<sup>[1,3]</sup> The history though is dominated by the onset of the pain and disability associated with the VBC itself, not with the initiating trauma. VBC has a broad differential

diagnosis, especially concerning for cancer and infections but includes vasculitis and postradiation and steroid treatment effects; in the absence of recent trauma, evaluation of these will dominate the initial workup.<sup>[4]</sup>

Despite being described over 100 years ago, we are still at the case report stage for KD.<sup>[2,3]</sup> As excellently described by Ranjan *et al.* in this journal, there is difficulty in making the diagnosis of KD.<sup>[5]</sup> How long prior to the VBC can the trauma be? Does there have to be imaging after the trauma demonstrating a preserved vertebral body? What work-up needs to be done to evaluate for other causes of VBC? Adding confusion is that some call the radiographic finding of intravertebral vacuum cleft "Kümmell's sign," which leads some to rely on

this finding as the main diagnostic feature rather than the clinical history of delayed VBC following trauma.<sup>[6]</sup>

As more cases of KD are reported, answers to the above questions should become clearer. They probably will be modern updates to the phases/criteria proposed by Steel in 1951.<sup>[1]</sup> Most likely there will need to be a history of trauma; the trauma must be significant enough to be memorable but not cause significant problems. Some symptoms following the trauma will probably be allowable but should either significantly improve within a short period of time or be very mild; the duration of nonsignificant limitations (“asymptomatic period”) will probably need to be weeks to months. There will be a phase of worsening, presumably as the VBC occurs. The work-up to exclude other etiologies will be based on the patient’s history/risk factors. The radiographic requirements beyond needing to show VBC will probably remain controversial: there is no clinical indication to get imaging if a patient is asymptomatic after a relatively mild trauma, and thus “delayed” VBC cannot be proven radiographically.

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