Point of View

Eric Truumees, MD

In this article McKiernan, Fascizewski, and Jenson compare four methods of reporting the height restoration that occurred in 23 of 65 fractures treated with vertebroplasty. The authors are to be commended for their objective: to develop a consistent method of documenting height restoration and fracture mobility in vertebral body augmentation procedures (i.e., vertebroplasty and kyphoplasty). As in much of spine care, there is little uniformity in reporting results. Different series set the bar higher and lower for themselves, making the statements “a 95% good to excellent outcome” or “80% fusion rate” meaningless, especially in comparison with other published studies with different criteria for “success.”

The authors examined four previously described techniques and found that reporting the percentage of height restoration relative to lost vertebral height would yield values that seemed to exaggerate the true magnitude of reduction. Conversely, reporting height restoration relative to fractured height “numerically favors restorations in fractures of greater severity.” Reporting absolute millimeters of height restoration was potentially problematic because of magnification error. They concluded that absent use of a known size, radio-opaque marker, reporting height restoration relative to a referent vertebral body was preferred and yielded acceptable precision while removing numerical bias.

I agree with their choice among the four methods proposed. Unfortunately, none of these measures assess the degree sagittal plane correction. In the short-term, VBA procedures seek to relieve pain and improve function. Intuitively, maintenance of sagittal plane spinal balance reduces the risk of pulmonary dysfunction, additional fractures, chronic pain, and mortality, and improves self-image and physical function.1–3 While these benefits appear obvious to practitioners of VBA, none has been proven against standard medical therapy. Measurements of height restoration are useful in assessing and comparing kyphoplasty and vertebroplasty, but they represent only a small part of the data needed to define the appropriate role for these procedures in the management of osteoporotic compression fractures. While degrees of deformity correction are more relevant than any absolute or relative measure of height restoration, functional improvement, pain relief, and complication rates are more important still.

References