

Missed incidental vertebral compression fractures on computed tomography imaging: More optimism justified

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Abstract

Missed incidental vertebral compression fractures on computed tomography (CT) imaging are a common problem. Although numerous publications are available on this topic, recent publications still show a high percentage of such missed fractures. The rate of such missed fractures in the authors department is much lower than that in the reported literature when routine multiplanar reconstructions are used for reporting CT scans. Therefore, a more optimistic view on this topic seems to be justified.

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TO THE EDITOR

I have read with great interest the article by Bartalena *et al*^[1] about the dilemma of missed incidental vertebral compression fractures on computed tomography (CT) imaging. As this topic has already been discussed for a long time, the rate of such missed fractures, especially in recent publications, should be concerned. However, the chronological presentation of data suggests that the performance of radiologists is getting worse over time, and this view is in my opinion too pessimistic. Follow-up data of the institutions with poor results after recognition of the problem would be interesting but are lacking. Having the problem of poor visualization of the spine on the primary axial slices in mind, we started reading all scans on a work station (Vitrea 2[®], Vital Images) with routine use of multiplanar reconstructions after the implementation of our new multislice CT scanner. A retrospective review of selected CT scans of the chest and abdomen from August this year for 50 patients (25 men and 25 women) at the mean age of 71.6 years (1 mm-thick slice, preliminary visual grading followed by semi-quantitative morphometry with a cut off of 25% height loss of abnormal vertebral bodies) showed that incidental vertebral compression fractures could be identified in 9 patients on CT imaging. In the original reports, such fractures were mentioned in 8 patients. The reporting rate therefore is about 89%. Only 11% of such fractures were not reported and eventually missed. This is better than the reported data, and I believe that other institutions perform CT scans as well. The rate of missed incidental vertebral compression fractures on CT imaging seems to depend highly on the local environment, especially the availability of high quality multiplanar reconstructions and an understanding of

the problem of missed incidental vertebral compression fractures.

In conclusion, a more optimistic view on this topic may be justified as some radiologists may have learned their lessons. However, until more data with improved detection rates are available, more education is thoroughly needed.

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