Introduction

Vertebral fragility fractures are the most common osteoporotic fracture causing significant morbidity and deterioration in quality of life in elderly patients. Unexpectedly, up to 70% of these fractures remain undiagnosed with only 46% reported. Radiologists can play a crucial role in identifying them, which, when treated, can reduce further fractures and positively impact the patient’s quality of life. In this audit, we evaluate the reporting of 200 cases performed at Pilgrim Hospital, Boston and provide a preview of what can be expected when RCR’s national audit on this subject is completed.

Standards


Target

1. 100% of reports to comment on the thoracolumbar spine.
2. 100% of moderate to severe vertebral fractures to be identified.
3. 100% of identified fractures to be reported unambiguously.
4. 100% of identified fractures to make appropriate recommendations for further assessment.

Methodology

200 consecutive CT Chest Abdomen and Pelvis in patients aged >70 were included. Cases of trauma, known bone metastases or myeloma were excluded. Spine assessed in sagittal reformats using semi-quantitative method (Genant et al.)

Results of 1st audit round

<table>
<thead>
<tr>
<th>Standard</th>
<th>Target</th>
<th>Achieved</th>
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<tbody>
<tr>
<td>Proportion of scans in which the reporting radiologist has commented on the thoracic and/or lumbar spine appearance</td>
<td>100%</td>
<td>25%</td>
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<tr>
<td>95%</td>
<td>99.5% had comment on the bones in general.</td>
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<tr>
<td>Proportion of scans in which moderate/severe vertebral fractures are correctly identified on the report</td>
<td>95%</td>
<td>47.8% (11 out of 23 cases)</td>
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<tr>
<td>Proportion of vertebral fractures reported using correct terminology (i.e. “vertebral fracture”)</td>
<td>100%</td>
<td>63.6% (7 out of 11 identified cases)</td>
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<td>Proportion of patients with vertebral fractures in which the report contains appropriate recommendations for further assessment</td>
<td>100%</td>
<td>0%</td>
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</table>

Examples of Unreported Fractures

References