Re-audit on the reporting of Osteoporotic Vertebral Fractures on Thoracic and lumbar spine films

George Bitar, Fiona Witham

Departments of Diagnostic Imaging, Portsmouth Hospitals NHS Trust, Portsmouth, Hants PO6 3LY, UK.

INTRODUCTION:

• Osteoporosis is a progressive, systemic skeletal disease characterised by a reduction of bone mineral density (2.5 standard deviations or more below average value) with subsequent increase in bone fragility and susceptibility to fractures.

• A vertebral fracture (VF) increases the risk of a further vertebral fracture by 5-fold. The morbidity and mortality makes it essential that patients are started on appropriate treatment.

• A local audit in 2005 of the reporting of vertebral fractures identified that a ‘fracture’ was only reported in 13.5% of cases with a vertebral abnormality being reported in 88.5%.

STANDARD:

• At least 95% of vertebral fractures should be reported as such, and these should be reported as a fracture, with ambiguous terminology avoided.

METHOD:

• 148 Thoracic and lumbar spine films in patients >65y from 01/12/14 – 30/04/14.
• A&E (trauma) and pathological fractures were excluded.
• Radiology reports were reviewed to determine whether:
  • the VFs had been identified.
  • the correct terminology was used.
  • the severity (mild, moderate or severe) of any VFs identified were scored using the Genant semi-quantitative assessment criteria.
  • osteoporosis had been suggested as an underlying cause of the fracture.

RESULTS:

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<thead>
<tr>
<th></th>
<th>Audit 2015</th>
<th>Audit 2016</th>
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<tbody>
<tr>
<td></td>
<td>Percentage</td>
<td>Percentage</td>
</tr>
<tr>
<td>Vertebral abnormality</td>
<td>88.5</td>
<td>98</td>
</tr>
<tr>
<td>Osteoporosis suggested</td>
<td>63.5</td>
<td>30</td>
</tr>
<tr>
<td>Fracture</td>
<td>13.5</td>
<td>79</td>
</tr>
<tr>
<td>Severity</td>
<td>32.6</td>
<td>35</td>
</tr>
<tr>
<td>Management advice</td>
<td>1.9</td>
<td>2</td>
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</tbody>
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CONCLUSION:

• Considerable improvement in the reporting of vertebral fractures, vertebral abnormalities being reported in 98% of cases.
• Scope for further improvement in the use of ambiguous terminology and in the grading of fracture severity.

ACTION PLAN:

• The findings were presented at a departmental audit meeting.
• Radiologists were encouraged to use appropriate terminology and grading systems.

REFERENCES: