Trends in hip fracture incidence and in the prescription of anti-osteoporosis medications during same time period in Belgium (2000-2007)

Hiligsmann, Bruyère, Reginster et al. Arthritis Care & Research. 2012 In press

Materials and methods

Incidence of hip fractures (2000-2007)
- National Hospital Database (INAMI/RIZIV)
- ICD-9 codes for hip fracture (reduced by yearly multiple registrations (=3.6%))
- Population aged over 50 years
- Validity: Permanent Sample (EPS – 2.5% of the Belgian population). ≠ less than 2%

Prescription of anti-osteoporosis medications
- INAMI/RIZIV – Pharmanet database
- Expressed as defined daily doses
- Bisphosphonates, raloxifene, PTH-analogue and strontium ranelate
Absolute number of hip fractures in Belgium

Total population aged over 50 years (2007): 2,037,664 (women) - 1,724,680 (men)

Hiligsmann et al. Arthritis Care Res. 2012 In press
Standardized incidence of hip fracture in Belgium

A direct method of standardization was used, with the year 2005 as reference.

Hiligsmann et al. Arthritis Care Res. 2012 In press
**Trend of hip fractures incidence in Belgium (2000-2007)**

Logistic regression (on age groups and year)

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average yearly change (%)</td>
<td>-1.12</td>
<td>-0.34</td>
</tr>
<tr>
<td>95% CI</td>
<td>-1.41; -0.31</td>
<td>-0.88; 0.25</td>
</tr>
<tr>
<td>P value</td>
<td>&lt;0.0001</td>
<td>0.1983</td>
</tr>
</tbody>
</table>

Female/male ratio for hip fractures

*From 3.12 (2000) to 2.95 (2007), p value <0.0001*

*Hiligsmann et al. Arthritis Care Res. 2012 In press*
Reversal of the hip fractures secular trend in Belgian women

Hiligsmann et al. Arthritis Care Res. 2012 In press
Number and incidence of hip fractures in Belgium by age groups

Hiligsmann et al. Arthritis Care Res. 2012 In press
Number of prescriptions of anti-osteoporosis medications in Belgium (2002-2009)

In population aged over 50 years

Hiligsmann et al. Arthritis Care Res. 2012 In press
Hip fracture incidence and prescriptions of anti-osteoporosis medications in Belgium (2002-2007)

Pearson’s correlation (Women): -0.93 (P value: 0.0063)
In population aged over 50 years

Hiligsmann et al. Arthritis Care Res. 2012 In press
Expected number of hip fractures in Belgium until 2025

Assuming the secular change observed between 2000-2007 will be maintained! Projections should be interpreted with cautious

Hiligsmann et al. Arthritis Care Res. 2012 In press