Current status of bone mineral density examination and osteoporosis treatment in patients with distal radius fractures

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【Introduction】
Both: 4 case
Left: 179 cases
Right: Side
BMD History of osteoporosis treatment, History of fragility fractures
Location of injury, Cause of injury, Method of treatment,
Survey Components: (10items)

【Purpose】
To investigate the current status of bone mineral density (BMD) measurement and osteoporosis treatment in patients with DRF

【Patient and Method】
Method : Retrospective study
Object : Patients with DRFs
Duration : January 1, 2010 ~ December 31, 2016
Exclusion criteria : under 50 years of age
those with pathological DRFs

Survey Components: (10items)
Age at the time of injury, Sex, Affected side, Type of fracture, Location of injury, Cause of injury, Method of treatment,
History of osteoporosis treatment, History of fragility fractures, BMD measurements before and after developing DRFs

【Result】
300 cases ( Female 250 cases, Male 50 cases )
Averaged age
68.1 years
Male : 63.9 years
Female : 70.6 years

Side
Right: 117 cases
Left: 179 cases
Both: 4 case

The cause of injury
26% 73%
26%
73%

The place of injury
17% 47% 36%
14%
50%
5%
3%
4%

Type
Vertebral fx. : 3.3%
Proximal humerus fx. : 1.0%
Femoral fx. : 3.3%
Total: 9.0%

BMD measurement (n=300)

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<th>Before</th>
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<tbody>
<tr>
<td>cases</td>
<td>8(2.7%)</td>
<td>40(13.3%)</td>
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YAM(n=45)

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<tr>
<td>cases</td>
<td>80%(s)</td>
<td>12(27%)</td>
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Medical intervention(n=300)

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<tr>
<td>cases</td>
<td>17(12.7%)</td>
<td>24(14.6%)</td>
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【Discussion】
- We considered the incidence of DRFs as an opportunity for initiating treatment intervention for osteoporosis and conducted an epidemiology investigation during that time. There are, till date, no reports on the epidemiological studies on osteoporosis treatment focusing on patients with DRF.
- The BMD measurement screening rate (2.7%) before DRFs was less than the average rate* (4.9%) in Japan. However, the BMD measurements after DRFs revealed that 76.9% of the patients underwent osteoporosis treatment.
- Unfortunately, 87% patients after injury did not BMD measurement. Thus, it is possible that a substantial numbers of patients requiring osteoporosis treatment were included among them.
- Our study results recommend that we should increase the screening rate of BMD measurements in the future, particularly among DRFs patients. Moreover, if necessary, appropriate treatment should be initiated for osteoporosis. Finally, it is suggested that regular screening for patients with DRF who do not require treatment currently is critical.

【Conclusion】
- We conducted a retrospective epidemiological study of BMD measurements and treatment intervention for 300 DRFs patients.
- Our findings suggest that the screening rate for BMD measurement before DRFs was as low as 2.7%. Moreover, 87% of the patients after DRFs had not undergone BMD measurement.