Indonesia

Overview

Today, Indonesia has a total population of approximately 237 million inhabitants and it is expected that 71 million people will be over 60 by 2050. It is estimated that 28.7% men and 32.3% of women have been diagnosed with osteoporosis, according to DXA. Nevertheless the disease is probably under diagnosed due to the fact that most of the population is distributed over the numerous islands of the country and that half of the 34 DXA machines are located in Jakarta. In rural areas osteoporosis is not a priority but improvement is expected since the Ministry of Health has recognized osteoporosis as a health priority in 2006. The Indonesian Healthy Bone Foundation (PERWATUSI) was established in 2004 and is actively involved in promoting awareness about osteoporosis with the help of corporate partners and IOF.

Key findings

The total population of Indonesia, which is widely distributed over its numerous islands is approximately 237 million\(^1\). It is expected to increase to 254 million by 2020 and 288 million by 2050 with 11.7% (29 million) and 24.8% (71 million) of the population being above the age of 60 years respectively\(^2\) (Figure 1). There is no data available on hip or vertebral fractures. Due to limited access to DXA facilities country-wide, a clear estimate of the prevalence of osteopenia and osteoporosis is not available. Data from chapters of the Indonesian Osteoporosis Society (PEROSI) suggests that about 41.8% of men and 90% of women are osteopenic, whereas 28.8% men and 32.3% women have osteoporosis according to WHO criteria.

Figure 1 Population projection for Indonesia until 2050

Based on limited data from 5 hospitals, it seems that the average hospital stay (nights) for all hip fractures in Indonesia is greater than 10-14 days. There are a total of 34 DXA machines available in Indonesia (0.001/10 000) with half of them in Jakarta (Figure 2). The cost of a test is 50 USD, which is not affordable by most people, and is not covered by any insurance scheme. Therefore access to this facility remains a major issue.

Ultrasound is commonly used but lack of proper standardization makes this approach questionable. A clinical scoring system has been found to be useful...
in predicting osteoporosis in a small sample of post-menopausal women in Jakarta, and may be a useful tool if validated in large numbers\(^3\).

Table 1 Diagnostic tools and cost

<table>
<thead>
<tr>
<th>total DXA machines</th>
<th>DXA machine/10 000</th>
<th>cost of DXA scan (USD)</th>
<th>income per capita per month (USD)</th>
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</thead>
<tbody>
<tr>
<td>34</td>
<td>0.001</td>
<td>50</td>
<td>276</td>
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Vitamin D insufficiency seems to be common in Indonesia, despite proximity to the equator, and has been reported in both pre- and post-menopausal women\(^4\). Indonesians are not great milk drinkers, in fact they are among the lowest consumers of milk in the world – under 10 liters per person annually (the average for Malaysia is 25 liters). While milk and food fortified with calcium and vitamin D is available, it is not widely used because of lack of awareness and economic reasons.

Oestrogen, raloxifene, calcitonin, and bisphoshonates are available in some areas. Phytoestrogens are gaining in popularity. Drugs are not usually reimbursable, except by some private insurance companies.

The Ministry of Health has recognized osteoporosis as a major problem since 2006, and efforts are underway, with the help of national societies, to spread the message about prevention among the public.

The Indonesian Healthy Bone Foundation (PERWATUSI) was established in 2004 and is actively involved in promoting awareness about osteoporosis, with the help of corporate partners. These include training tutors in osteoporosis, training exercise instructors in exercises for bone health, distributing materials and books on osteoporosis, organizing a capacity building program with IOF and conducting seminars and symposia.

Level of awareness in health care professionals is variable. In larger cities like Jakarta, doctors are updated regularly by various seminars and lectures, and the level of awareness is good. In rural areas, especially in many local Puskesmas (primary health care centres), osteoporosis has not been a priority. Improvement is expected on this front since the Ministry of Health has included osteoporosis as a health priority.

To tackle the issue of osteoporosis in Indonesia, several approaches have to be carried out simultaneously, at different levels. There is a need for the development of a support system for osteoporosis patients, and a need for much greater awareness among the public about lifestyle measures for prevention and building a better peak bone mass. Studies on identification of risk factors are required to develop better prevention strategies. Health professionals need improved training in diagnosis and treatment. More widespread availability of DXA is essential for such a large and spread out country. It is hoped that many of these issues will be better addressed by the Ministry of Health in the near future.

References

1. U.S. Census Bureau, International Data Base

In Indonesia, osteoporosis has been named a health priority and it has benefited from high profile political support on National Osteoporosis Day.