OVERVIEW

Peru is the fourth most populous country in South America. Osteoporosis is a problem that mainly affects the elderly population and postmenopausal women in Peru, involving more than 7% of women between the ages of 40 and 60 years, and close to 30% of women older than 60 years. Focus should be on prevention. If women can reach adequate peak bone mass, ingest an adequate amount of calcium, maintain a regular regimen of physical exercise, and reduce modifiable risk factors, the general prevalence of osteoporosis will decrease.

Currently there are three societies that participate in the field of osteoporosis. The Peruvian Society of Osteoporosis and Bone Diseases (SPOEO), the Peruvian Society of Rheumatology (Sociadad Peruana de Reumatología (SPR)), and the Peruvian Menopause Society (Sociedad Peruana del Climaterio (SPC)). Osteoporosis is not the main field of study and activities for SPR and SPC.

Eighty per cent of SPOEO scientific activities are dedicated to osteoporosis and 20% to other bone related disease. During 2012, the calendar of educational activities includes three workshops that will be located outside Lima and one densitometry course in Lima. This is a significant change from previous years where SPOE activities were centralized in Lima, Peru.

A coordinated action among health professionals, governmental institutions, public media and the Peruvian people is needed to change the prognosis of osteoporosis. Early diagnosis of osteoporosis should be a priority, especially in rural areas of Peru. Finally, governmental reimbursement of osteoporosis treatments, including anti-resorptive therapy, will be crucial for the future of treatment in Peru.

KEY FINDINGS

Population growth statistics

The present population of Peru is estimated to be 29 million, of which 18% (5.2 million) is 50 years of age and older and 4% (1.2 million) is 70 years and over. By 2050, it is estimated that the total population will rise to 37 million, of which 36% (13 million) will be 50 years and older and 12% (4.5 million) will be 70 years and older¹ (fig 1).

Epidemiology

Data from EsSalud² indicates a rate of osteoporosis of 7% for women between the ages of 40 and 60 years and a rate of 30% for women older than 60 years of age.

Even higher rates were found in a 2001 study by the Peruvian Society of Rheumatology. In adults, osteoporosis prevalence rates of 20% and 14% for women and men respectively were reported, with the prevalence rate increasing to 41% in women over 50³.

Hip fracture

EsSalud (National Health Insurance provider for the working population) estimates that 12 - 16% of women older than 50 years will have a hip fracture annually in Peru³. Based on the present population of 2.7 million women 50 years of age and over in Peru, this would produce between 324 000 to 432 000 fractures in this
population per year. Population projection statistics estimate the number of women 50 years of age and over will grow to 7.5 million in 2050. Therefore, we can extrapolate these data to estimate that between 900,000 and 1.2 million women 50 years of age and older could fracture in the year 2050.

A study conducted in Lima, Peru in 2000 showed a one-year mortality rate of 23.2% following hip fracture. Mortality rates were higher among males than females. In 2002, a community based study revealed a hip fracture incidence rate of 444:100,000 and 264:100,000 women and men respectively. The participants in the study were aged 50 years and over.

The direct hospital cost for treating a hip fracture is estimated at 800 USD. The average hospital bed stay for a hip fracture patient is three weeks.

The social costs of hip fractures and effect on quality of life is more significant for informal workers than for the formally employed. The latter have insurance to cover their absence from work whereas informal workers do not.

**Vertebral fracture, other fragility fractures**

No available information.

**Diagnosis**

In Peru there are 125 DXA machines allowing for one DXA machine for every 232,000 inhabitants. There are 435 ultrasound scanners allowing for one machine per 67,000 in habitants. There is no wait for a DXA or ultrasound scan. Diagnostic equipment is only available in urban centers.

**Reimbursement policy**

Peru has private and public health insurance systems and a free government health service for the poor. Within the public sector, there are two types of national insurance. The first, called Seguro Integral de Salud (SIS) is mandated by the Peruvian Ministry of Health (Ministerio de Salud, or MINSA). This free insurance aims to protect the health of Peruvians who do not have health insurance, giving priority to those vulnerable populations who are living in poverty or extreme poverty. The second type, EsSalud, is a national insurance coverage that provides health services to the working population and their families within national EsSalud facilities and hospitals. EsSalud covers approximately 20% of the population, which includes formal sector workers, retirees and their families. Twenty per cent of the population does not have access to any health care services or facilities, regardless of their insurance coverage.

The cost of a DXA scan is 35 USD. Ultrasound scans are generally free of cost. These diagnostics tests are not reimbursed by the national health plan, but may be reimbursed by private health care insurance. Patients under the age of 50 years must demonstrate risk factors in order to be eligible for reimbursement.

Only private health insurance companies provide reimbursement for osteoporosis medications.

**Calcium and vitamin D**

Calcium, vitamin D supplements, and fortified foods are available in Peru.

**PREVENTION, EDUCATION, LEVEL OF AWARENESS**

Osteoporosis is recognized by the Ministry of Health as an issue amongst other non-communicable diseases and there are currently government public awareness programmes covering prevention, diagnosis and management of osteoporosis. Physician guidelines do not yet exist. There is no governmental health professional training and currently no approved governmental guidelines for osteoporosis treatment or prevention.

Programmes in lifestyle prevention of osteoporosis and patient support groups do not yet exist in Peru. Public health awareness programmes are supported via websites, radio advertisements and public lectures. The Peruvian Society of Rheumatology holds national and international courses, and scientific congresses. They also organize educational activities for hospital physicians via monthly meetings.

The Sociedad Peruana de Osteoporosis y Enfermedades Óseas (SPOEO), the Peruvian Society of Rheumatology (Sociedad Peruana de Reumatología), and the Peruvian Menopause Society (Sociedad Peruana del Climaterio) are active in Peru. Programmes for the public are available during World Osteoporosis Day and National Osteoporosis Day. According to SPOEO, the level
of osteoporosis awareness is high among individuals and the pharmaceutical industry is active in public awareness through educational talks and distribution of educational materials.

The level of awareness of osteoporosis is considered high among health care professionals as well. In general, gynaecologists, radiologists, geriatricians, orthopaedists, rheumatologists and endocrinologists are well equipped and trained in diagnosing and treating osteoporosis. General practitioners, emergency care physicians and paediatricians are less well-equipped and trained. Nurses and physiotherapists are considered well-trained whereas other allied health professionals are not. Osteoporosis guidelines for medical and allied health professionals are available through the Peruvian Society of Osteoporosis and the Peruvian Society of Rheumatology.

RECOMMENDATIONS

- Development of patient support groups.
- Better training for general practitioners and allied health professionals.
- Government reimbursement of osteoporosis medications.
- Improved early detection of osteoporosis, especially in rural areas.
- Coordinated action among health professionals, governmental institutions, public media, and the Peruvian people to improve the prognosis of osteoporosis.

REFERENCES

1. U.S. Census Bureau, International Data Base 2011