Republic of Tajikistan

Overview

Despite the interest in osteoporosis in the global literature, many aspects of this serious problem are under-investigated in Tajikistan and countries with a similar socio-economic level. The risk factors for osteoporosis together with the regional features (like frequent child-birth, elevated number of children, alimentary factors, etc.), and the lack of studies due to inaccessibility to modern diagnostic and treatment methods are likely contributors to this situation. As studies on this problem are absent, the Tajik Public Health Department currently has no evidence-based data on diagnosis and treatment of osteoporosis in the country. There are few data from other regions which reflect conditions present within Tajikistan. Specific local considerations are the high birth rate, the large percentage of multiparous women, dietary deficits, as well as the high incidence of iodine deficiency diseases, diabetes mellitus, and kidney diseases. Risk factors for osteoporosis are present in different combinations in 55.8% of patients, including 18.3% - anemia, 9.8% - goiter, 5.8% - diabetes mellitus, 32.3% - low weight, 53.3% - lack of exercise. The latter risk factors significantly influence osteoporosis development and outcomes.

There are no official statistics about the incidence of osteoporosis and associated fractures in the country. In spite of the estimated high frequency of osteoporosis in Tajikistan, extensive research on this problem has not yet been carried out. However, according to the Abualy ibn Sino Trauma Clinic of Tajik State Medical University the incidence of osteoporosis and associated pathological fractures is likely higher than in other regions.

Key findings

The characteristics of the demographic situation in Tajikistan reflect the global political socio-economic changes after the civil war: the deterioration of living conditions, the emergence of an open market economy, the partial misbalance in demographic structure, the loss of the social protection of large families and the changes in the population’s structure. On January 1st 2010, the Tajik population was estimated to be 7.5 million people; more than 73.5% of the population live in the countryside.

Hip fractures

There are no official statistics showing the incidence of fractures in different age groups or regions in the country. According to the Trauma Clinic, metaphyseal radial fractures are predominant amongst those fractures associated with osteoporosis; hip fractures are the second most common type of fracture.

Due to the unavailability of modern technologies for the treatment of hip fractures (hip replacement, osteosynthesis) in the country, most hip fractures associated with osteoporosis are treated conservatively. Up to 30% of patients refuse surgery and 25-30% have contraindications to an operation. These patients
with various complications are treated in out-patient departments by traumatologists, surgeons and family doctors and because of the severe osteoporosis in most women, radial and hip fractures lead to different complications including Sudeck syndrome and pseudoarthrosis. Hip replacement has been actively introduced in the country over the last two years. This operation has been done only in a small group of patients for hip fracture but there is a trend towards widespread implementation.

The cost of an extracarticular osteosynthesis for hip fracture is on average 200 USD and hip replacement costs 3,500 USD.

**Vertebral fractures**

Evidence of vertebral fractures are seen in a large percentage of elderly patients, however more accurate statistics are not available.

**Diagnosis**

In Tajikistan, there is only one DXA machine at the Institute of Maternity and Childhood in Dushanbe. This examination is on a fee basis except for the privileged categories of patients. As the majority of the population has no access to densitometry, Tajikistan is introducing a *scale of screening-diagnosis of osteoporosis*. Recently, thanks to the efforts of various organizations, Tajikistan has had a practice of carrying out this examination free of charge. Tajikistan has serious problems diagnosing osteoporosis as only 5% of the population at risk can access densitometry, the majority of practitioners are not familiar with osteoporosis diagnosis and treatment and there is an important lack of awareness within the Tajik population.

**Reimbursement**

Osteoporosis medications are free of charge for a privileged category of patients only.

Systematic pharmacological treatment of osteoporosis has been widely used in the country for the last five years only. According to unconfirmed data, the availability of the pharmacological treatment in the country covers only 5-10% of the needs and only 30% of patients receive systematic treatment.

**Calcium and vitamin D**

There are no official data on the incidence of vitamin D deficiency and calcium intake with food. The diet of the majority of the population does not meet the required standards.

The Ministry of Public Health, functioning Health Centres and other associations are very active in promoting healthy lifestyles and chronic noninfectious diseases prevention. However, this work is still at the initial stage, and therefore, results are far from desirable. Unfortunately, there is no osteoporosis association in the country, but there is some focus on osteoporosis by the relevant professional associations. This problem is being investigated within the traumatology and endocrinology department of the Abuali ibn Sino Tajik State Medical University.

**References**

2. Source: U.S. Census Bureau, International Data Base.