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Case Report

Women with osteoporosis present their quality of life: Three cases from Vlora, Albania

Abstract

Aim: Osteoporosis is a disease characterized by low bone mass and micro-architectural deterioration of bone tissue, with a consequent increase in bone fragility and increase to fracture risk. Around the world, up to one in three women and one in five men are at risk of an osteoporotic fracture. Osteoporosis can be prevented and managed with healthy and balanced diet, rich in calcium and vitamin D, an exercise plan, a healthy lifestyle and regular medications. Our aim was to show what patients with osteoporosis, based in their experience with the disease suggest to do for better quality of life.

Methods: In this study we are reporting two cases with osteoporosis and one with osteopenia. Based on qualitative research methods face-to-face semi-structured interviews were conducted.

Patients included in the study were patients diagnosed with osteoporosis and randomly selected from medical records in the Primary Health Care Center, No 2 in the city of Vlora. We contact them by phone and once the overall purpose has been explained, they express eligibility to be part of the study.

Results: This study shows how the disease history was, what where the factors and barriers for success in the self-management of osteoporosis and the preventive measures for osteoporosis in case of osteopenia. These cases report *how osteoporosis progresses silently and can have a severe impact on the health and well-being of those who suffer from it, especially if it is not diagnosed and treated in a timely manner.*

Conclusion: People with osteoporosis can have a better quality of life if the disease is managed as recommended, including dietary and physical activity *recommendations, as well the information about any medications that they need.*

Introduction

Osteoporosis has been operationally defined on the basis of bone mineral density (BMD) assessment. According to the World Health Organization criteria, osteoporosis is defined as a BMD that lies 2.5 standard deviations or more below the average value for young healthy women (a T-score of <-2.5 SD) [1]. A disease characterized by low bone mass and micro-architectural deterioration of bone tissue, with a consequent increase in bone fragility and increase to fracture risk [2]. Osteoporosis is a disease that reduces the BMD of bones to the point where they break easily even as a result of a minor fall, a bump, a sneeze, or a sudden movement. Osteopenia is a disease related to osteoporosis and is defined when the T-score is in the range 1-2.5. A person with osteopenia is at risk for getting osteoporosis if it is not controlled [1-3]. Fractures caused by osteoporosis can be life-threatening and a major cause of pain and long-term disability, and in many

countries, up to one in three women and one in five men aged 50 years or over will suffer an osteoporotic fracture [3,4]. Osteoporosis can be prevented with a healthy diet with enough calcium and vitamin D, exercise, not drink in excess or smoke [5]. In addition, osteoporosis can be managed with a balanced diet rich in calcium and vitamin D [6], an exercise plan, a healthy lifestyle and regular medications [7]. Because of the morbid consequences of osteoporosis, the prevention of this disease and its associated fractures is considered essential to the maintenance of health, quality of life, and independence in the elderly population. The number of osteoporotic fractures is certain to increase in both men and women as a result of the ageing population and two thirds of all incident fractures occurred in women [8]. The major increases will occur outside of Europe and the United States, particularly in Asia and Latin America [5]. The cost of osteoporosis, including pharmacological intervention in the European Union in 2010 was estimated at €37 billion – out of which: o Costs of treating incident

fractures represented 66%, o Pharmacological prevention 5% and o Long-term fracture care 29% [9,10]. Health knowledge is an important influencing factor to determine if people adopt healthy living, so promoting osteoporosis knowledge among patients who are at risk of developing the disease can help them adopt healthy living ways and prevent the development of osteoporosis and complications. Nurses play an integral role in facilitating the detection of osteoporosis, through their involvement in the assessment of patients at various points of contact within the health care system—primary care settings, emergency departments, fracture clinics, and the admission of individuals to various levels of healthcare (acute, long-term care, community home care). Following the diagnosis of osteoporosis, nurses play a significant role in supporting individuals in the treatment and management of this condition through ongoing assessment, teaching and counseling [11]. The aim of presenting these case studies is to demonstrate the process by which osteoporosis is detected, and the patient's quality of life is improved through lifestyle counseling and health knowledge improvement regarding the disease.

Methods

The aim was to conduct face-to-face semi-structured interviews with patients diagnosed with osteoporosis to identify the risk factors influencing the development of their disease, the role of health care professionals in preventing and early detection of the disease, the economic costs of the disease and their quality of life. These case reports are real patient's story from Primary Health Care Center No.2 in the city of Vlore, a city in southern of Albania. After the random selection of six patients with osteoporosis from the medical records, it was possible to contact them by phone and once the overall purpose was explained, three of them expressed eligibility to be part of the study. The data was collected by interviewing them. Patients were women and were interviewed in October 2017. The interviews lasted 2 hours on average and took place in the health care center settings. Semi-structured interviews were developed based on literature review [12]. All patients have the same questions given to them. The interview included three topics of questions. Topic one included questions about personal story (work, family, the symptoms at diagnosis, where did she learn to take care of osteoporosis, what kind of things she learned etc). Topic two included questions about the self-management of osteoporosis (what they do to manage osteoporosis, lifestyle, eating and exercising, how their daily life activity changed after osteoporosis diagnosis, what kind of thing do in particular help them the most with the management of osteoporosis etc). Topic three included questions barriers and factors for success in osteoporosis self-management and better quality of life related to management of the disease. The interviewers ensured that all aspects of the study were sufficiently explained during the interviews. All interviews were conducted with a commitment to respecting the anonymity of respondents. The study was approved by the ethics committee of Research Center of Public Health, University of Vlore. All women give oral informed consent to participate in the study after presenting them the aim, methodology, and institutional affiliation of the researchers, as well as the potential risks and

benefits of the study. The research was conducted according to the Declaration of Helsinki principles.

Background of first case

The first case is an 83 years old woman. She lives in Vlore, Albania. She was a potential candidate to develop osteoporosis due to early menopause at age 30 and giving birth to seven children. The patient was diagnosed with osteoporosis using *bone mineral density (BMD)* testing at the age of 80 years old.

"I did not have any visible signs of osteoporosis, I had pain, tiredness in walking, and I was affected by rheumatoid arthritis. I was very fortunate that I did not make a fracture after I fell down several times. I am always very careful when moving" she explained.

Following her interview she said *"I was a very active person. Now, I didn't really move too much because of constant fatigue. I always consumed milk, yogurt less. In addition, the concerns suffering from osteoporosis bother me a lot because makes me anxious and depressed. Also, being optimistic and thinking positively is of great importance"*.

She cited that medical staffs (doctor, nurse) have not given her preventive consulting for osteoporosis even if she was affected of rheumatoid arthritis, which is associated with an increased risk of osteoporotic fractures [13]. In addition, her emphases that the support and care of her children and family members is her success factor in osteoporosis self-management as well in hear well-being. Also, based on her experience with osteoporosis she recommended all older women to take care of their bone and screening for osteoporosis.

Background of second case

The second case is a 60-year-old woman. Even if she was diagnosed with rheumatoid arthritis at age 47 and with no other risk factors for osteoporosis as the early installation of menopause [14,15], or family history with fractures [16], in her case there were no visible signs of osteoporosis. She gave birth to two children and her menopause was onset at age 51. She was diagnosed with osteoporosis, after a small accidental fall which resulted in a deep thrombosis in one leg and a knee fracture. She attributes the good self-management of her osteoporosis to early detection, *economic* standpoint, healthy lifestyle and regular drug treatment. Doctors have advised her to get more sun exposure and exercise by swimming usually in *early morning* and *late afternoon*.

She emphasizes the importance of prevention *"Now, every year based on my doctor recommendations', I get bone mineral density (BMD) testing"*.

She cited that the financial costs of treatment and rehabilitation have often been unaffordable.

Following her experience, she said *"I suggest all women and girls to be active, to care for the health of their bone, to consume as much dairy products, fish, fruits and vegetables as possible because the calcium present in these products is very important for bone health. These are informed choices that I have adopted after the health counseling I have taken from my physician"*.

Today she is defined general well-being as before being diagnosed with osteoporosis. She also stresses that regular medication in doses and care are very important in the good self-management of disease. *“At first I tried to reduce the doses of medications, and for that I had constantly pain. I think a caution for patients trying to reduce the doses of prescribed medications is that they should talk to their doctor first, before making any changes”*, she says.

Background of third case

The third case is a 50-year-old woman diagnosed with osteopenia following gastric resection.

Her menopause was onset at age 47 and she has given birth once. Osteopenia is a disease related to osteoporosis and is defined when the T-score is in the range 1–2.5. Osteopenia is the term used for bones that have become somewhat less dense than normal, but not as severe as in osteoporosis. Bone mineral density estimates the chances of bone breakage without any major strain. Osteopenia can cause fractures, distorts the posture and is accompanied by a lot of pain. A person with osteopenia is at risk for getting osteoporosis if it is not controlled [1–3]. But an individual can prevent osteoporosis cutting down alcohol intake, quitting smoking, exercising regularly, getting enough calcium and vitamin D and eating healthy foods, including fruits and vegetables [5–7]. The patient states that there was no sign or symptoms. After the gastric resection surgery, the patient reports that doctors recommended her to get BMD testing, which reveals presence T-score in the range classified as osteopenia. Also, she states that blood electrolytes were low, while calcium levels have decreased considerably. It is treated for one year with intravenous medications, 1/3 months.

“The condition did not affected my daily activity, I have healthy eating and I’m not performing any physical activity. Walking daily can also strengthen your bones. After the diagnosis I started walking 45 minutes per day” she explained.

Following her experience she said *“I am not worried about osteopenia or osteoporosis, although I am conscious that there are greater risks of fracture. Being a health care professional and the fear of disease progression helped me to be more careful about the importance of healthy nutrition and regular drug treatment”*

Based on her experience she also advises women to:

“Eat enough calcium rich foods, get enough sun exposure and be active, keep walking comfortably”.

Discussion and Conclusion

This case reports show how osteoporosis progresses silently and, especially if not diagnosed early, can lead to painful and debilitating fractures. Living with osteoporosis will be better with regular medication treatment and healthy lifestyle changes. In addition, screening and health education from health care practitioners is an important influencing factor in the prevention of osteoporosis. It is aimed at two groups, postmenopausal women as the high risk group and the other one, ordinary people. The age at which natural

menopause occurs is between the ages of 45 and 55 for women worldwide [17]. In Albania, there is no evidence related to the onset of menopause in women. Except for the first case, the other two cases presented were within the natural menopausal interval, respectively onset of menopause at age 30, 51 and 47. In addition, early menopause has been associated with higher risk ratio for osteoporosis [18], higher risk for fracture as women age [19]. It is an essential for lifelong bone health for people at every life stage adopting a healthy eating with plenty of calcium rich foods, fruits, vegetable and regular exercise. These case reports also show that people with osteoporosis can have better quality of life if the disease is diagnosed early and managed well.

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