

Association between quality of life (QoL) and osteoporosis, in elderly women in a Greek population

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Abstract: To explore the association between quality of life (QoL) and osteoporosis, in elderly women in a Greek population.

Methods: A total of 100 elderly patients were divided into two groups: elderly patients with primary osteoporosis (case group, n = 50) and normal elderly patients (control group, n = 50). Quality of life was compared between the two groups.

Results: Quality of life was significantly different between the case and control groups. The physical function, role-physical, bodily pain, general health, vitality, social-functioning, role-emotional, mental health, and total scores in case group were significantly lower than those in the control group ($P < 0.01$).

Conclusion: Quality of life, in elderly patients with osteoporosis in a Greek population, was poorer than in elderly patients without osteoporosis. Our findings indicate that increased efforts to improve the social support and quality of life in elderly osteoporosis patients are needed in Greece. Further longitudinal studies should be conducted to provide more clinical evidence to determine causative factors for the observed association between quality of life and osteoporosis.

Keywords: Osteoporosis, Quality of Life, Greece.

1. INTRODUCTION

The World Health Organization Quality of Life (WHOQOL) project was initiated in 1991. The aim of the project was to develop an international cross-cultural quality of life assessment instrument (1). Assessing functional status and quality of life has been considered central to evaluating disease progression and developing new treatments, particularly in chronic diseases such as osteoporosis (2).

Quality of life encompasses various facets of life, including health status, environment, financial aspects and human aspects. Health status is a subset of quality of life that covers physical, mental, and social well-being (3,4). To measure quality of life is to assess subjective feelings objectively. Using quality-of-life questionnaires, we can evaluate treatment effects in clinical trials (3,5). Questionnaires have been used in epidemiological studies to assess quality of life and to obtain data regarding disease severity, disease morbidity, health care, and treatment (3,6).

Assessing health-related quality of life has been considered an important marker of the clinical evolution of patients with osteoporosis and fractures (5,7–11). In addition, this assessment is central to health science research and clinical trials. Physical, emotional, and psychological incapacity, combined with the pain that results from hip, spine, or wrist fractures, can alter quality of life (11).

The aim of this study is to evaluate the association between quality of life (QoL) and osteoporosis, in elderly patients in a Greek population.

2. METHODS

Elderly patients ($n = 50$, average age = 72.8 ± 5.1 years) with primary OP and normal elderly patients ($n = 50$, average age = 73.2 ± 5.4 years) were recruited between September 2018 and November 2018. Exclusion criteria included secondary OP; diabetes; cancer; recent acute infection; severe cardiac, liver, or kidney dysfunction; cerebrovascular disease; severe Parkinson's disease; depression or anxiety; dementia; and trauma or operation in the previous six months.

All of the participants underwent a standardized clinical assessment, which included a medical history, physical examination, completion of the Short Form-36 (SF-36) questionnaire, and BMD measurement. Informed consent was obtained from all participants prior to participation.

The SF-36 scale was used to assess QoL. The scale consists of 36 items within 8 scales that assess the following general health concepts: physical function (PF), role-physical (RP), bodily pain (BP), general health (GH), vitality (VT), social-functioning (SF), role-emotional (RE), and mental health (MH). Each of the 8 scales has a lowest possible score of 36 and a highest possible score of 150. Higher scores indicate better QoL (12). The total score and each factor score were calculated.

Unpaired t-tests were conducted for data analysis. Differences were considered statistically significant and very significant at $p < 0.05$ and $p < 0.01$, respectively. SPSS version 25.0 for Windows (SPSS Inc., Chicago, IL, USA) was used for all statistical analyses.

3. RESULTS

There were no significant differences between the two groups in age, marital status, or body mass index (all $p > 0.05$). The SF-36 showed the following scores in the case and control groups, respectively: PF, 68.4 ± 19.2 vs. 88.2 ± 18.3 ; RP, 58.4 ± 21.7 vs. 80.3 ± 22.3 ; BP, 57.9 ± 19.2 vs. 80.8 ± 19.1 ; GH, 44.7 ± 19.9 vs. 62.7 ± 18.5 ; VT, 62.5 ± 20.5 vs. 78.9 ± 18.7 ; SF, 64.8 ± 21.3 vs. 84.7 ± 23.7 ; RE, 62.9 ± 28.2 vs. 84.4 ± 23.4 ; and MH, 60.9 ± 18.6 vs. 78.1 ± 19.2 . The PF, RP, BP, GH, VT, SF, RE, MH scores in the OP group were significantly lower than those in the control group ($p < 0.01$).



4. DISCUSSION

The WHQ should be used to evaluate women in perimenopause because it addresses the specific characteristics of this population. A disadvantage of the WHQ is that it does not address the feelings that result from social interactions and is restricted to evaluating how women perceive the perimenopause-related alterations in their bodies (13).

In clinical practice, self-reported questionnaires are an excellent option because patients can complete the questionnaires in the waiting room. However, this procedure depends on the patient's level of education. The time required to complete a questionnaire is dependent on the behavior of the patient and the physician. Short questionnaires can be easily completed by the patient in a short period of time, thus increasing the patient's willingness to do so.

Assessing quality of life is essential to health research and clinical trials involving osteoporosis. Most quality of life osteoporosis questionnaires have been developed in the English language. Thus, for these instruments to be used in international studies and in clinical practice, it is necessary that these instruments address the same concepts in all languages to make it possible to pool data and compare results across countries. Measuring health-related quality of life has become an important issue in health service research and in clinical trials involving osteoporosis.

5. CONCLUSION

Our study showed that QoL was significantly poorer in patients with osteoporosis than in the control group. Our results may not be representative of the overall Greek population. Moreover, the cross-sectional study design cannot determine causative factors for the observed association between risk factors and outcomes; therefore, follow-up studies should be conducted in the future.

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