FRACTURE OF THE PROXIMAL THIRD OF THE FEMUR AND BMI IN ELDERLY WOMEN

Rodrigues C[I], Correia F[I], Oliveira B[I,II]

Comunicação oral 06

INTRODUCTION

Increasing life expectancy has provided a demographic aging, which results in an increased prevalence of chronic diseases, as well as falls and bone fractures in elderly. Regarding the fractures of the proximal third of the femur, it is known that they are the most common traumatic injuries among elderly, with high morbidity and mortality. The relationship between Body Mass Index (BMI) and the prognosis of these episodes remains unclear.

OBJECTIVES

The aim of this case-control study was to evaluate the possible association between BMI and the prognosis of fractures of the proximal third of the femur.

METHODOLOGY

The study group consisted of 40 women aged between 65 and 99 years old, hospitalized in the Orthopedic and Traumatology Department of Hospital São João (Porto) due to a fracture of the proximal third of the femur. The control group was composed of 36 institutionalized elderly women, aged between 65 and 94 years old, without any history of this type of fracture. We carried out anthropometric measurements (weight and height), body composition assessment by bioelectrical impedance analysis, sociodemographic and clinical data collection and cognitive and functional assessment.

RESULTS AND DISCUSSION

The control group mean BMI was 28.3 kg/m² (sd = 6.0) and the study group mean BMI was 25.5 kg/m² (sd = 4.9), which is significantly lower (p = 0.029). We also noted that the fracture risk is lower in single or divorced women (p = 0.020), smaller (p = 0.016), with higher BMI (p = 0.012) and without hypertension (p = 0.016). By analysing the ROC curve, we can see that a BMI below 22.6 kg/m² is a predictor of the risk of femur fracture.

CONCLUSION

We found that in elderly women, a higher BMI protects them from the fracture of the proximal third of the femur; therefore we should not promote weight loss corresponding to a BMI below 22.6 kg/m², which is near the lower limit of the range proposed by Lipschitz in 1994.

[I] Faculdade de Ciências da Nutrição e Alimentação da Universidade do Porto.

[II] Laboratório de Inteligência Artificial e Apoio à Decisão – Instituto de Engenharia de Sistemas e Computadores – Tecnologia e Ciência, Porto, Portugal.

cinara.rodrigues@hotmail.com