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KNEE OSTEOARTHRITIS AND ASSOCIATED FACTORS IN A RURAL COMMUNITY

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BACKGROUND

Knee osteoarthritis reduces physical function increasing the risk of developing other chronic conditions. We aimed to estimate the prevalence of symptomatic knee osteoarthritis (KOA) not related to trauma in a rural community in Brazil and to study the relationship between age, gender, body mass index (BMI), abdominal obesity and the most frequent self-assessed chronic diseases with KOA.

MATERIALS AND METHODS

This was a cross-sectional study in which randomly selected individuals over 15 years old from a rural community were administered a structure questionnaire to collect demographic data and self-reported chronic diseases. We carried out standardized measurement of patients' height, weight and waist circumference. Body mass index were categorized as normal ($< 25 \text{ kg/m}^2$) and overweight/obesity ($\geq 25 \text{ kg/m}^2$). Abdominal obesity was defined as waist circumference $\geq 94 \text{ cm}$ for men and $\geq 80 \text{ cm}$ for women. Participants were classified as having knee OA if they fulfilled the American College of Rheumatology (ACR) clinical criteria for knee OA1. Student t or chi-squared tests were used to compare those with and without knee OA. Significant (two-tailed $p < 0.05$) variables were chosen for multivariate analysis by logistic regression, one model with BMI and another one with abdominal obesity. The ethics committee from Universidade Federal da Grande Dourados approved the study (CAAE: 695435176.0000.5160) and all participants signed an informed consent for participation.

RESULTS

We included 372 people, 212 (57%) women with a mean age of 46.5 (18.3) years. Prevalence of symptomatic KOA not related to trauma was 14.52% (95% CI = 11.3–18.46). People with KOA were older (57.70 ± 14.46 vs. 46.66 ± 18.23 years old, $p < 0.0001$) more likely to be women (77.78 vs. 53.46%, $p = 0.001$). They also have higher frequency of hypertension (50 vs. 26.41%, $p = 0.001$), type 2 diabetes (33.33 vs. 8.18%, $p < 0.0001$), dyslipidaemia (27.78 vs. 11.78%, $p = 0.009$), anxiety/depression (38.89 vs. 14.46%, $p < 0.0001$), overweight/obesity (83.33 vs. 61%, $p = 0.003$) and abdominal obesity (92.59 vs. 61.63%, $p < 0.0001$). Multivariate analysis showed that KOA were significantly associated with age (odds ratio, OR = 1.03, confidence interval, 95% CI = 1.01–1.05, $p = 0.007$), BMI $\geq 25 \text{ kg/m}^2$ (OR = 1.26, 95% CI = 1.04–4.91, $p = 0.039$), type 2 diabetes (OR = 3.31, 95% CI = 1.31–8.36, $p = 0.011$), anxiety/depression (OR = 2.64, 95% CI = 1.34–5.18, $p = 0.005$) and also with abdominal obesity (OR = 3.17, 95% CI = 1.15–8.72, $p = 0.026$).

CONCLUSION

The prevalence of symptomatic nontraumatic KOA in this rural community is 14.52% (95% CI = 11.3–18.43). Age, BMI $\geq 25 \text{ kg/m}^2$, abdominal obesity, type 2 diabetes, anxiety and/or depression were associated with the presence of symptomatic KOA in multivariate analysis.

REFERENCE

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