Objective: Due to the increase in the elderly population, osteoporosis and related fractures are increasing and causes serious social problems such as lower quality of life of seniors and economic loss. This study is aimed towards the general population in rural areas for prevalence and related risk factors of osteoporotic fracture.

PREVALENCE OF OSTEOPOROTIC FRACTURE IN AGES

The research comes from the Korean Rural Genomic Cohort study consisting of 10,111 people, 4,090 men and 6,021 women, ranging from 40 to 70 years old from rural areas in Korea. The questionnaire results show that 907 men experienced fractures with 208 fractures due to osteoporosis. 1,058 women experienced fractures with 603 fractures due to osteoporosis. Fractures and related clinical factors were collected through questionnaire, body mineral density was measured with heel quantitative ultrasound, and osteoporotic fracture groups were statistically analyzed.

RISK FACTORS ASSESSMENT

Risk factor questionnaire - Alcohol intake, Smoking, Parental history of fracture, medical disease affected osteoporosis, medications related osteoporosis, menstrual history

Clinical examination – weight, height, waist and hip ratio

Body fat assessment – impedance method (nibrody 2.0)

QUS measurement – heel ultrasound (GE lunar, achilles)

Statistical analysis

o Univariate chi-square, unpaired t-test, and ANOVA test between osteoporotic fracture group and non-fracture group

Osteoporotic fracture subjects of study participants

METHODS

Osteoporotic fracture prevalence is 8.9%, with women having significant correlation factors in age, bone density T-score, family history of osteoporotic fracture, and smoking habits

CONCLUSION

The authors thank that researchers of Institute of Lifelong Health in Yonsei University Wonju College of Medicine and Department of Preventive Medicine in Catholic Kwandong University College of Medicine, Chosun University College of Medicine, and Chungnam University College of Medicine for collecting data. We are thank to CDC in Korea for supporting this study.

The researchers claim no conflicts of interest.