Multidetector CT in Quantitative Morphometric Assessment of Post-Menopausal Vertebral Fractures in Black Women of Central Africa.

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Background

Osteoporosis and major Non-Communicable Diseases are identified by WHO as leading cause of death worldwide with heavy economic burden worldwide and particularly in low income countries. DXA is not availability in our country. Spine CT scanner with sagittal reformation images are known for the ease quotation of vertebral fractures by quantitative morphometric system described by Genant et al. The aim of our study was to determinate the rate and the feature of vertebral fractures in postmenopausal black women living in DRC referred for thoracolumbar screening and assessed with CT scanner using sagittal reconstruction.

Patients and methods

Four hundred thirty consecutive post menopausal women referred for Thoraco-lumbar CT scanner from June 2011 to June 2016 were enrolled in this study and theirs CT images used to quote vertebrae.
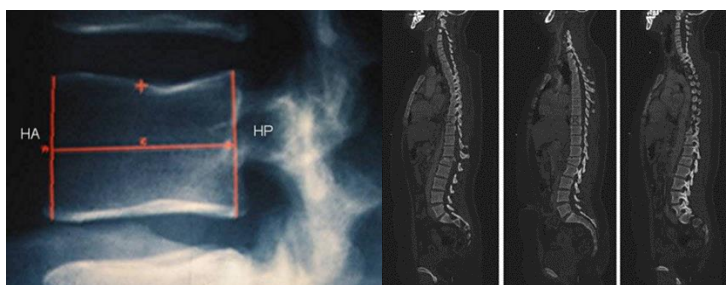
Results

Twelve point eighty nine percent 12.89% of a total of 4730 vertebrae were fractured whose more than half (7.82%) of grade 1. The fracture rate is lower than in Caucasian and Asian and increase with ageing and duration of menopause (24.51% in 70 years of age and over).

Conclusion

Vertebral fracture global frequency was found. Vertebral fractures are present in our population and adverse consequences will arise in terms of morbidity and mortality. Lack of infrastructure, health policy and poverty will contribute to boost for a bad prognosis. The method is reproducible and can be used as routine clinical tools in conditions of non availability of DXA.