

## Osteoporosis Self-assessment Tool for Asians (OSTA) Score and Quantitative Ultrasound (QUS) in Diagnosis of Osteoporosis in Postmenopausal women

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Free Paper 9, November 11, 2017, 2:15 PM - 3:15 PM

**Objective:** to determine the accuracy of OSTA score and quantitative ultrasound technique (QUS) as compared to gold standard method, Dual Energy X-ray Absorptiometry (DXA) scan, in diagnosis of osteoporosis in postmenopausal women in Myanmar

**Methods:** This study was a hospital based cross sectional observational descriptive study. Total 64 postmenopausal women of ages over 50 years were recruited according to selection criteria from teaching hospitals of University of Medicine 2 during one year study period (2013). All patients were assessed by OSTA score and bone mineral density (BMD) was measured at calcaneum by QUS. The presence or absence of osteoporosis was confirmed in all patients by DXA scan at both lumbar spine and hips.

**Results:** 31.3% of study population had osteoporosis and 39.1% had osteopenia at lumbar spine. At femoral neck, there was no patient with osteoporosis but 18.8% had osteopenia. The sensitivity and specificity of OSTA for lumbar spine osteoporosis were 55% and 47.7% respectively. Accuracy was 50%. The sensitivity of QUS was only 10%, the specificity was 86.4%. Accuracy was 62.5%. By combination of OSTA and QUS, the sensitivity was only 10% but specificity became 97.7% and accuracy was 70.3%. But the association between the combined methods and DXA results was not statistically significant ( $p = 0.228$ ).

**Conclusion:** Both OSTA score and QUS (neither alone nor combination) cannot be used confidently as alternative methods for diagnosis of osteoporosis in postmenopausal women, in compared with DXA scan. However, further studies with larger sample size for Myanmar population are still needed.