

PD19: Concordance between Quantitative Ultrasound and Osteoporosis Self-Assessment Tool for Asians in Identifying Osteoporosis among Malaysians

Chin KY, Soelaiman IM

Department of Pharmacology, Universiti Kebangsaan Malaysia Medical Centre, Cheras, Malaysia

ABSTRACT

Introduction: Calcaneal quantitative ultrasound (QUS) is a useful tool in osteoporosis screening. However, QUS device may not be available at all primary healthcare setting. Osteoporosis Self-Assessment Tool for Asians (OSTA) is a simple algorithm for osteoporosis screening that does not require any sophisticated instruments. This study explored the possibility of replacing QUS with OSTA by determining their agreement in identifying individuals at risk for osteoporosis. **Methods:** A cross-sectional study was conducted among Malaysian men and women aged 50 years or above. Their bone health status was measured using a calcaneal QUS device and OSTA. The association between OSTA and QUS was determined using Spearman's correlation and their agreement was assessed using Cohen Kappa and receiver operating curve (ROC). **Results:** All QUS indices correlated significantly with OSTA ($p < 0.05$). The agreement between QUS and OSTA was minimal but statistically significant ($p < 0.05$). The performance of OSTA in identifying subjects at risk for osteoporosis according to QUS was poor to fair in women ($p < 0.05$), but not statistically significant for men ($p > 0.05$). **Conclusion:** The agreement between QUS and OSTA is minimal in categorizing individuals at risk for osteoporosis. Therefore, they cannot be used interchangeably in osteoporosis screening.

KEY WORDS:

QUS; Bone; Osteoporosis; Receiver Operating Curve; OSTA

PD20: Effective Bladder Filling Protocol in Conformal Radiotherapy for Rectal Cancer: A Comprehensive Approach to Reduce Small Bowel Toxicity

Ahmad R¹, Kumari S², Sabarudin A¹

¹Programme of Diagnostic Imaging and Radiotherapy, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, ²College of Allied Health Sciences, Sungai Buloh, Ministry of Health

ABSTRACT

Introduction: Small bowel toxicity can be minimized by treating patients with full bladder because full bladder displaces the small bowel superiorly and away from radiation field. However, previous studies showed that having a consistent full bladder throughout five weeks of radiotherapy treatment is difficult to achieve. Therefore, the implementation of an effective bladder filling protocol is required. **Method:** This study was conducted at Radiotherapy and Oncology Department Hospital Kuala Lumpur. In the control group a total of 22 patients were enrolled to undergo an existing departmental bladder filling protocol that requires patients to drink 200 ml of water. 22 patients were introduced to a new bladder filling protocol that requires patient to drink 500 ml of water, patients were given written bladder filling instructions and daily bladder ultrasound scan was performed. The effectiveness of both protocols was evaluated by assessing the variation of bladder volume between group, inter-patient bladder volume variation, and incidence and severity of diarrhea. **Results:** The bladder volume decrease were statistically significant in control group ($p = 0.007$) and study group ($p = 0.001$). There is a significant difference in the bladder volume changes in the control and study group, ($p = 0.001$). Inter-patient bladder volume variation is lower in study group compared control group. The incidence and severity of diarrhea was significantly lower in study group compared to control group ($p = 0.001$). **Conclusion:** Bladder volume reduces both in control and study group, new bladder filling protocol in the study group reduces inter-patient bladder volume variation and reduces incidence and severity of diarrhea during treatment.

KEY WORDS:

Bladder volume, rectal cancer, diarrhea, drinking protocol