Korelasi rasio ketebalan korteks tulang radius distal menggunakan radiografi konvensional dengan T-score radius distal menggunakan dual X-Ray absorptiometry (DXA) = The correlation between cortical thickness ratio of distal radius by conventional radiography and t-score of distal radius by dual X-Ray absorptiometry (DXA)

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Abstrak

Latar belakang dan tujuan: Angka kejadian osteoporosis di Indonesia cukup tinggi disertai peningkatan risiko patah tulang terutama pada wanita. Pemeriksaan kepadatan massa tulang dengan DXA merupakan baku emas dalam mendiagnosis osteoporosis dan memperkirakan risiko patah tulang berdasarkan nilai T-score, namun ketersediaan perangkat DXA di Indonesia masih terbatas. Rasio ketebalan korteks merupakan salah satu parameter sederhana, objektif, dan mudah diterapkan dengan menggunakan radiografi konvensional yang berguna untuk memperkirakan kepadatan massa tulang, namun perlu dibuktikan korelasinya dengan nilai T-score.
Metode: Uji korelatif dengan pendekatan potong lintang pada nilai rasio ketebalan korteks radius distal menggunakan radiografi konvensional dan T-scoreradius distal menggunakan DXA berdasarkan database populasi Asia, terhadap 40 subjek penelitian, menggunakan data sekunder dalam kurun waktu November 2016 sampai April 2017.
Hasil: Dengan uji korelasi Pearson, didapatkan nilai p<0,05 dan r=0,39 antara nilai rasio ketebalan korteks radius distal menggunakan radiografi konvensional dan T-score radius distal menggunakan DXA.
Kesimpulan: Terdapat korelasi positif yang lemah antara nilai rasio ketebalan korteks radius distal menggunakan radiografi konvensional dan T-score radius distal menggunakan DXA.
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Background and Objective: The prevalence of osteoporosis in Indonesia is high with increased risk of fractures, especially in women. Examination of bone density by DXA is the gold standard in the diagnosis of osteoporosis and predicts fracture risk based on the T-score, but the availability of DXA devices in Indonesia is very limited. The cortical thickness ratio is a simple, objective parameter, and easily applied to conventional radiography in estimating bone density, but needs to be proven its correlation with the T-score.

Methods: A cross sectional correlation study between the cortical thicknessratio of distal radius by conventional radiography and T-score of distal radius by DXA based on population database in Asia, conducted in 40 subjects in the period of November 2016 toApril 2017.
Results :With the Pearson correlation test, there is a significant correlation ($p < 0.05$ and $r = 0.39$) between the cortical thickness ratio of distal radiusby conventional radiography and T-score of distal radius by DXA.
Conclutions: There is a weak positive correlation betweenthe corticalthickness ratio of distal radius by conventional radiography and T-score of distal radius by DXA.