Korelasi indeks ketebalan korteks tulang radius distal menggunakan radiografi konvensional dengan T-score kolum femur menggunakan dual X-ray absorptiometry (DXA) = Correlation between distal radius cortical thickness index using conventional radiography and femoral neck T-score using dual X ray absorptiometry (DXA)

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Abstrak

Latar belakang dan tujuan: Masalah osteoporosis merupakan masalah dalam kesehatan masyarakat terutama di negara berkembang. Kurangnya jumlah alat DXA menyebabkan minimnya penderita yang terdiagnosis dini osteoporosis dan mendapat terapi, hingga akhirnya mengalami patah tulang. Pengukuran indeks ketebalan korteks tulang radius distal merupakan parameter sederhana, objektif, dan mudah diterapkan, 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 indeks ketebalan korteks radius distal menggunakan radiografi konvensional dan T-score kolum femur menggunakan DXA berdasarkan database populasi Indonesia, terhadap 38 subjek penelitian, menggunakan data primer, dalam kurun waktu Desember 2016 sampai Mei 2017.
Hasil: Uji korelasi Pearson antara indeks ketebalan korteks radius distal pada lokasi 1 dan 2 dengan nilai T-score kolum femur, didapatkan nilai koefisien korelasi r=0,46 p=0,096 untuk lokasi 1 dan r=0,45 p=0,093 untuk lokasi 2. Pada kelompok jenis kelamin perempuan, didapatkan nilai r=0,53 p
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Background and objective: Osteoporosis is a problem in public health, especially in developing countries. DXA lacks of availability causing problem in osteoporosis early diagnosing and treatment until the occurance of bone fracture. Measurement of distal radius cortical thickness index using conventional radiography is a simple, objective and easy to applied methods for estimating bone density, but needs to be proven its correlation with T score.
Methods: A cross sectional correlation study between the cortical thickness index of distal radius by conventional radiography and T score of femoral neck by DXA based on population database in Indonesia, conducted in 38 subjects in the period of December 2016 to May 2017.
Result: Using the Pearson correlation test between the cortical thickness index of distal radius in two location with T score of femur column by DXA, we obtained coefficient correlation value of r 0,46 p 0,096 for location 1 dan r 0,45 p 0,093 for location 2. In the female group we obtained r 0,53 p 0,05 for location 1 and r 0,52 p 0,05 for location 2. Based on age group, r value for location 1 and 2 in 60 years age group is r 0,31 p 0,194 and r 0,32 p 179 for location 1 and 2, respectively.
Conclusion: There is a weak positive correlation between the cortical thickness index of distal radius by conventional radiography and T score of femoral neck by DXA.