

INTISARI

HUBUNGAN DOSIS KUMULATIF METIL PREDNISOLON ORAL DAN KEPADATAN MASSA TULANG PENDERITA LUPUS ERYTEMATOSUS SISTEMIK MENGGUNAKAN N-MID OSTEOKALSIIN SEBAGAI VARIABEL MEDIATOR

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Latar belakang : Glukokortikoid merupakan merupakan terapi utama LES dan penyebab tersering osteoporosis sekunder melalui pengaruh langsung dan tidak langsung terhadap tulang. Penelitian tentang pengaruh dosis kumulatif Glukokortikoid oral terhadap osteoblas dan kejadian osteoporosis masih jarang. N Mid osteokalsin merupakan penanda dari aktifitas osteoblas.

Tujuan penelitian : membuktikan kadar N-Mid osteokalsin serum sebagai variabel mediator dalam hubungan antara dosis kumulatif metil prednisolon(MP) oral dengan kepadatan massa tulang penderita (BMD) pada penderita LES.

Metode : Penelitian menggunakan desain potong lintang dilakukan di Poliklinik Reumatologi RSUD dr.Moewardi Surakarta periode Agustus-September 2019. Subyek penelitian adalah wanita SLE berumur 18-50 tahun belum menopause, dalam terapi MP oral minimal 6 bulan dan tidak mempunyai penyebab osteoporosis sekunder lain. Data dosis kumulatif MP oral dari buku obat, kemudian dilakukan pemeriksaan darah dan BMD. Data diolah dengan SPSS, analisis dengan regresi linier dan tes sobel.

Hasil : Subyek penelitian berjumlah 34 orang, dimana 5 orang (14,71%) osteoporosis. Terdapat korelasi negatif $r=-0,404$ antara dosis kumulatif MP oral dengan kadar N Mid Osteokalsin, korelasi positif $r=0,400$ antara kadar N Mid Osteokalsin dengan BMD serta korelasi negatif $r=-0,369$ antara dosis kumulatif MP oral dengan BMD. Hasil persamaan regresi linier adalah sbb : $\text{Kadar Osteokalsin} = 13,843 - 0,497 \text{ dosis kumulatif MP}$, $\text{Gambaran BMD} = 0,826 + 0,010 \text{ Kadar Osteokalsin}$, $\text{Gambaran BMD} = 1,007 - 0,011 \text{ Dosis kumulatif MP}$. Namun Tes Sobel mendapatkan Z hitung kurang dari Z tabel.

Kesimpulan : Kadar N Mid Osteokalsin tidak memediasi pengaruh dosis kumulatif MP oral terhadap Gambaran BMD. Hal itu berarti bahwa pengaruh dosis kumulatif MP terhadap Gambaran BMD bersifat langsung.

Kata kunci : Dosis Kumulatif MP, N Mid Osteokalsin, BMD.

ABSTRACT

CORRELATION BETWEEN CUMULATIVE DOSAGE OF ORAL METHYLPREDNISOLONE AND BONE MINERAL DENSITY USING N-MID OSTEOCALCIN AS MEDIATING VARIABLE IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS.

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Background : Glucocorticoids is the main therapy for SLE and the most reason leading to secondary osteoporosis both directly and indirectly. Studies related to the relations of cumulative dosage of oral glucocorticoids and the occurrence of osteoporosis are still limited. N-mid osteocalcin is a marker of the activated osteoblasts.

Aim : to prove N-mild osteocalcin serum level as a mediating variable in the relations among cumulative dosage oral methylprednisolone (MP) and bone Mineral Density (BMD) in SLE patients

Method : The study was using cross sectional design, held in Rheumatology Polyclinic in dr. Moewardi Hospital Surakarta from August to September 2019. The subjects were female SLE patients from 18-50 years old, had not have menopause, in oral MP therapy for the minimum of 6 months and did not have any other cause of secondary osteoporosis. Data were collected from the drug records, blood examination and BMD. The data were processed using SPSS, analyzed using linear regression and sobel test.

Results : The subjects were 34 patients, in which 5 patients (14,7%) were found osteoporosis. There is negative correlation $r = -0,404$ between cumulative dosage of oral MP and N-Mid Osteocalcin level; positive correlation $r=0,400$ between N-Mid Osteocalcin and BMD; negative correlation $r= -0,369$ between cumulative dosage of oral MP and BMD. The results of linear regressions are: Osteocalcin level = $13,843 - 0,497$ cumulative dosage, $BMD = 0,826 + 0,010$ osteocalcin level, $BMD= 1,007 - 0,011$ cumulative dose of MP. But from the Sobel test result, the counted Z is less than Z table.

Conclusion : N-Mid Osteocalcin level is not mediating the effects of cumulative dosage of oral MP to the BMD result. That implies the relation of cumulative dosage of MP and BMD result is directly.

Keywords : Cumulative dosage of MP, N Mid Osteocalcin, BMD.