Event Booklet

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THE CORRELATION OF VITAMIN D LEVEL WITH MANDIBULAR FRACTAL DIMENSION IN HIV-AIDS CHILDREN

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**Background**: Vitamin D is a complex compound hormone which has a pluripotent effect. Deficiency vitamin D associated with several disease such as HIV infection. The mechanism vitamin D level reduction in HIV patients occurs through several mechanism: increase in consumption of 25 (OH) D by macrophage and lymphocyte in line with the development of disease. There is correlation between vitamin D level and bone mineral and density in HIV patients. Fractal dimension is an instrument use to measure bone osteoporosis. The research objective was to determine the correlation of vitamin D level with fractal dimension of mandibular cortical bone in HIV children.

**Research method**: The research method is cross sectional study, serum 1,25-dihydroxyvitamin D and calcium levels were assessed from blood for randomly selected subject of HIV infected children enrolled treatment at Klinik Terapi FKUP Rumah Sakit Hasan Sadikin Bandung, West Java, Indonesia during March-June 2015. Panoramic radiograph were taken for measuring fractal dimension on cortical bone of the mandible.

**Result**: Result of the study showed a significant relationship between level of vitamin D and fractal dimension of cortical bone of the mandible in children with HIV with r, 0.83 and p value 4,564 using Spearman rho of 0.006, showing a significant value (<0.01).

**Conclusion**: Vitamin D level affects fractal dimension of cortical bone of the mandible in HIV/AIDS children.