Comparison of Mean Age of Diagnosing Osteoporosis between Patients on Long-Term Glucocorticoids and Patients Not on Glucocorticoids Treatment

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Glucocorticoid induced secondary osteoporosis is common in both genders and is one of the main causes of osteoporosis occurring before 50 years of age. This is mainly due to the bone loss and inhibition on bone formation by glucocorticoids. Aim of the study was to describe the difference in the mean age of diagnosing of osteoporosis between the patients on long-term glucocorticoids and those who were not on glucocorticoids. This retrospective study was carried out using the DXA scan data base at Nuclear Medicine Unit, University of Peradeniya. Treatment with systemic glucocorticoids for more than three months was considered as long-term glucocorticoid treatment. A total of 645 patients were included in the study. Of them 73 who received long-term glucocorticoids, 49.3% had osteoporosis (mean age =50.66±16.81 years) and 50.7% had no osteoporosis (mean age=56.62±15.62 years). Of the 572 patients who were not given glucocorticoids, 59.3% had osteoporosis (mean age=60.02±12.85years) and 40.7% had no osteoporosis (mean age=57.22±12.32 years). These results showed that patients who received long-term glucocorticoid had osteoporosis at a significantly lower mean age compared to patients not on glucocorticoids (p value<0.001). However, the mean age for the patients without osteoporosis in both groups did not have a significant difference (p value=0.7). This finding suggests the need for early assessment of bone mass for early detection of osteoporosis among patients who received long-term glucocorticoid treatment. High percentage of osteoporosis found among patients who did not receive glucocorticoid treatment could be due to the presence of other confounding risk factors that influence to have low bone mass and increases the prevalence of osteoporosis.

Keywords: Osteoporosis, Long term glucocorticoid, DXA scan