ШЕСТТИ КОНГРЕС НА ЗДРУЖЕНИЕТО НА ПЕДИЈАТРИ НА
РЕПУБЛИКА МАКЕДОНИЈА СО ИНТЕРНАЦИОНАЛНО УЧЕСТВО

КНИГА СО ТРУДОВИ

Is there a place for ctx with cystic fibrosis

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Background: Imbalance between bone formation and degradation in cystic fibrosis (CF) has become an important issue for developing osteopenia. Bone turnover markers in CF patients indicate that they suffer from hyperresoption and an inadequate compensation in bone formation even when clinically stable. Bone turnover during growth may be of value in the identification of individuals who may be at risk for osteoporosis later in life. High plasma levels of C-terminal telopeptide of type 1collagen (CTX) reflects raised osteoclast activity. This study analyzed CTX levels alongside BMD in patients with CF.

Method: CTX levels ng/ml (0, 3 - 0, 5) were assessed at annual screening. BMD was measured by dual energy x-ray absorptiometry (DXA) scans with spinal scores recorded. Reduced BMD scores were categorized as osteopenic and osteoporotic values.

Results: The study included 80 CF patients who were divided in 3 groups depending Z or T score of bone mineral density (BMD). 55CF patients had normal BMD (NBMD), 17osteopenic and 8 osteoporotic values. Mean values for CTX (ng/ml) were for NBMD 1.24 ± 0.74, for osteopenic 1.24 ± 0.84 and for osteoporotic 1.05 ± 0.48 . Raised CTX levels were seen amongst 34 (62%) with NBMD, 10 (59%) with osteopenia and 4 osteoporotic (50%) respectively and greatest with osteoporotic compared with NBMD and osteopenic groups.

Conclusions: The majority of patients (60%) had raised CTX values, suggesting raised osteoclastic activity. Bisphosphonates may have good effect on bone status. Bone turnover markers such as CTX may be valuable in selecting and monitoring efficacy of bone treatments.