

LOW BONE MINERAL DENSITY IN CHRONIC PANCREATITIS

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Background: Chronic pancreatitis (CP) is associated with irreversible pancreatic dysfunction which lowers the bone mineral density. Bone disease is an under-recognized cause of morbidity in chronic pancreatitis. The aim of the study was to evaluate the changes found in bone mineral density and serum vitamin D level in patients with chronic pancreatitis. **Methods:** This cross-sectional study was carried out in the department of Gastroenterology, Dhaka Medical College Hospital from April 2022 to June 2023. Thirty-five eligible patients diagnosed with chronic pancreatitis in different stages were enrolled. Bone Mineral Density (BMD) was estimated by Dual Energy X-ray Absorptiometry (DXA) and serum vitamin D level was measured by radioimmunoassay (RIA). **Results:** The study participants (22 males; 13 females) had mean age of 37.69 ± 12.79 years, duration of illness was 6.90 ± 3.82 years, and mean Body Mass Index (BMI) of 20.58 ± 3.47 kg/m². Half of the patients (48.6%) were smoker. Most of the patients 25(71.4%) had tropical chronic pancreatitis. Seventeen (48.6%) patients had normal BMD, 14(40%) patients had osteopenia and 04 (11.4%) patients had osteoporosis according to WHO criteria. Serum vitamin D deficiency was found in 80% of patients with mean value of 15.92 ± 7.21 ng/ml. Significant differences were observed in body mass index, smoking status and disease duration between normal and low BMD group. Multiple linear regression showed only smoking was independently negative predictive of low bone mineral density. **Conclusion:** Low BMD reflecting osteopenia is more common in chronic pancreatitis patients in course of disease progression. It demands physician's attention to bone health in chronic pancreatitis patients.

Keywords: Low Bone Mineral Density, Chronic Pancreatitis

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