Aims and Objectives

Assessment of BMD is the standard criterion for diagnosis and evaluation of osteoporosis in Western Maharashtra. BMD provide a static picture of skeleton, whereas the biochemical markers of bone turnover can provide dynamic status of bone remodeling. With this view, we plan to determine relevant biochemical parameters which would reflect osteoblastic and osteoclastic activity in the metabolic bone disease i.e. PMO.

In the follow up study, the impact of antiresorptive therapy was evaluated by assaying the biochemical parameters pre and post therapy.

Objectives:
A) To determine the bone mineral density of PMO patients and controls.

B) Biochemical parameters which reflect osteoblastic activity.
   1) Assay of serum osteocalcin.
   2) To estimate the activity of serum alkaline phosphatase.
   3) To determine the major elements such as calcium, phosphorus and magnesium in serum.
   4) To estimate the level of serum total proteins and albumin.
   5) To estimate the level of vitamin C in serum.

C) Biochemical parameters which reflect osteoclastic activity.
   1) To estimate the activity of serum tartrate resistant acid phosphatase.
   2) To estimate the level of hydroxyproline in urine.
   3) To estimate the level of creatinine in urine.

D) To determine the cholesterol concentration in serum.

E) To evaluate the use of these biochemical parameters for the diagnosis and management of osteoporosis.