

Estimation of Serum Levels of Calcium and Inorganic Phosphorus in Breast Cancer Patients

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Abstract : Breast cancer is a type of cancer which is developed by the formation of a tumor on the breast. This tumor invades and causes different electrolyte imbalance. The present study was designed to measure the serum calcium and inorganic phosphorous levels and to check the frequency of hypercalcemia and hypophosphatemia in breast cancer patients. Serum calcium and phosphorous levels of fifty breast cancer women of 18-70 years of age group and fifty healthy women of same age group were measured by using semi-automated chemistry analyzer (Humalyzer 3000, Human, Germany). Significant variation in these levels was observed. The mean calcium value in BC patients was higher 9.398 mg/dl as compared to controls which were 8.694 mg/dl. Whereas the mean value of inorganic phosphorus level was lower 4.060 mg/dl in BC patients as compared to controls having 4.456 mg/dl. In this study, the frequency of hypercalcemia in Breast cancer patients was 10% i.e. only 10 out of 50 Breast cancer patients were suffering from hypercalcemia. Whereas the frequency of hypophosphatemia in this study was only 2 % i.e. only 1 out of 50 patients was suffering from hypophosphatemia. Thus it is concluded that there is a significant change in serum calcium and inorganic phosphorous levels in Breast cancer patients as the disease progresses. So, this study will be helpful for the clinicians to maintain serum calcium and phosphorous levels in Breast cancer patients and also preventing them from further complications.

Keywords : serum analysis, calcium, inorganic phosphorus, hypercalcemia hypophosphatemia

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