



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Determination of Alkaline Phosphatase Activity in Patients with Different Zinc Metabolic Disorders

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Abstract: Our purpose was to investigate the effect of different zinc metabolic disorders on alkaline phosphatase activity. Serum zinc, glucose and alkaline phosphatase activity were studied in 32 patients with liver cirrhosis, 30 with chronic renal failure and 42 with insulin-dependent diabetes mellitus (IDDM) compared to 42 healthy volunteers. Serum glucose concentration was significantly higher ($P < 0.001$) in IDDM and liver cirrhosis patients ($P < 0.05$) compared to the controls. Serum zinc concentrations tended to be lower in all different diseases but did not reach statistical significance. Alkaline phosphatase activity was higher in IDDM ($P < 0.05$) and liver cirrhosis patients ($P < 0.01$) compared with the controls. No positive correlation between serum zinc and alkaline phosphatase activity was recorded in any disease. In conclusion, the investigated diseases did not affect the level of serum zinc; however, there was an alteration in alkaline phosphatase activity in patients suffering from diabetes and liver cirrhosis. Consequently, this may be attributed to the functional disturbance that occurred in these patients. Finally, zinc concentration did not follow alkaline phosphatase activity as indicated by the weak correlation obtained.

Key Words: Zinc, liver cirrhosis, diabetes, chronic renal failure, alkaline phosphatase

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