

Plasma trace heavy metal and bromine concentrations in hemodialysis patients

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Abstract

Although trace elements have an important roles in many vital enzymatic functions etc. , patients with chronic renal failure undergoing hemodialysis are potentially at risk of deficiency and excess of trace elements.

As the details of which were not well understood, plasma mercury, strontium, chromium, molybdenum, lead and bromine concentrations were measured by PIXE method in 36 control subjects and 36 patients treated with regular hemodialysis patients.

The plasma levels of molybdenum and bromine were significantly lower in hemodialysis patients with compared to the controls. Plasma mercury, strontium and chromium levels were not significantly different in both groups. Only the level of lead was higher in hemodialysis patients. The difference in mechanism of absorption and excretion between lead and other elements are suggested.

In patients, there were no correlations between these trace element concentration and age or duration of dialysis.

As in hemodialysis patients molybdenum and bromine of essential elements are clearly low, and lead potentially toxic elements is high, it is necessary to note.