

EXTREME LEVELS OF CREATINE KINASE IN BATTERED CHILD SYNDROME

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22 months old female toddler was admitted in the PICU in comatous state after being severely beaten. Vital functions were seriously disturbed. It was hypothermic, in shock, the breathing was shallow and irregular and the heart rate bradycardic. The child was also severely bruised all over the forearms, the legs, the gluteal region and the back. It required mechanical ventilation, after complete respiratory arrest, and volume expansion, along with circulatory support.

CT brain scan was performed revealing extensive brain hemorrhage in the lateral ventricles as well as subarachnoid. EEG was flattened with almost no activity.

In the days that followed it developed multi-organ failure with congestive heart failure, hepatic lesion and acute renal insufficiency with oliguria.

Serum analyses revealed hyperosmolarity with elevated glucose and serum sodium levels, as well as decreased potassium levels and a marked rise in the enzymatic activity. Most substantial rise was noted in the serum Creatine Kinase(CK) activity (8161 U/l).

Vigorous hydration, fluid and electrolyte replacement to prevent kidney damaging, hepatoprotectives, and also cardiotoxic along with vasoactives to reduce the systemic resistance and improve peripheral perfusion) were administered until clinical and laboratory improvement.

A substantial fall in the activity of CK after first three days (down to 331U/l) of the treatment followed.

Unfortunately, regardless the recovery of the vital functions, the massive brain injury was lethal.

We suggest that extreme values of creatine kinase levels might not be only result of rhabdomyolysis, but of hyperosmolarity and brain injury as well.

