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Albumin Enriched Peritoneal Dialysis in Acute Copper Poisoning

—A case report—

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A twenty-three-year old male was admitted because of jaundice and hematuria. Two days before entry, he ingested copper sulfate (about 30 gm) for suicidal purpose.

The third admission date, sudden decreased urine output was developed and mental deterioration was followed inspite of using chelating agent (D-Penicillamine 500 mg, qid). So, peritoneal dialysis with added albumin (20% albumin 40 ml+Inperinol 1,000 ml, 10 times) and without albumin (Inperinol 1,000 ml, 10 times) was performed.

The amounts of copper removed by peritoneal dialysis with albumin was significantly greater than that removed by dialysate without albumin (36 ug/dl: 2.1 ug/dl). Daily urine output, renal function test and other laboratory findings were imporved after dialysis. The patient discharged on 13th admission date without any complications.

Chelating agents form a copper complex, which is readily excreted in the urine. But, renal failure percludes the effectivieness of these drugs. So, we conclude that albumin enriched peritoneal dialysis is effective method for management of the renal failure in acute copper poisoning.