REPORT ON CASE SERIES OF ACETAMINOPHEN POISONING AT CHO RAY HOSPITAL REVIEWING THE ROLE OF hemoperfusion IN TREATMENT OF ACUTE POISONING

Author: Dr. Duong Toan Trung (Hemodialysis Department – Cho Ray Hospital)
Instructor: Dr. Nguyen Minh Tuan (Hemodialysis Department – Cho Ray Hospital)
Email: minhtuan2066@yahoo.com.vn

Abstract:

Nowadays, most cases of drug or chemical poisoning are treated primarily by intensive medical care. Intensive supportive measures such as hemodialysis or hemoperfusion may be helpful in patients with severe complications who need removing toxic agents. The factors influencing to the removal of toxins by hemodialysis and hemoperfusion are understood partly clearly. As a practical guide, drugs that can be eliminated with both techniques will be presented and updated periodically according to the development of techniques of producing filtration membrane.

Although nephrologists and emergency and critical care physician usually deal with dialysis-related decisions in treatment for poisoning case because of their popularity, although, the mortality rate is not high. The role of hemodialysis and hemoperfusion in the treatment for poisoning is frequently discussed in the field of Resuscitation and Poison Control when mention to techniques used to treat poisoning patients such as hemofiltration, continuous dialysis (CAVH, CVVH), plasma plasmapheresis (PP) and blood transfusion. Chelation agents may require a combination of hemodialysis and hemoperfusion (HD and HP), for example, aluminum, iron, thallium, mercury and other metal poisoning cases)[2]

Objection and Method

Case series report

Result and Report Case Study

	Time from taking drug to admission	Dosage of APAP	Clinical findings	Laboratory features	Serum concentration of APAP (mg/l)	Level of poisoning	Treatment	Result
1	3 days	Not clear	-Coma -Respiratory distress	-Metabolic acidocis -Increased liver enzymes -Renal injury -Hemostasis disorders	121,6	Severe	NAC for 72 hours	Dead
2	24 hours	Not clear	-Vommitting -Unconscious state	-Metabolic acidocis -Increased liver enzymes -Renal injury -Hemostasis disorders	209	Severe	NAC for 72 hours	Dead
3	15 hours	24g	-Getting nauseous -Stomachache	-Renal injury -Hemostasis disorders	31,9	Severe	NAC for 72 hours Plasma exchange Hemoabsorption	Survive
4	10 hours	48g	-Vommitting -Unconscious state	-Metabolic acidocis - Increased liver enzymes -Thrombocytopenia	442,5	Severe	NAC for 20 hours Hemodialysis	Survive
5	4 days	25g	-Vomitting	-Increased liver enzymes -Hemostasis disorders	Out of reagent	Severe	NAC for 20 hours Hemoabsorption	Survive
6	3 days	50g	-Vomitting	-Metabolic acidocis -Increased liver enzymes -Hemostasis disorders	Out of reagent	Severe	NAC for 20 hours Hemoabsorption	Survive
7	4 days	25g	- Vomitting	-Metabolic acidocis -Increased liver enzymes -Hemostasis disorders	Out of reagent	Severe	NAC for 20 hours Hemoabsorption	Survive
8	3 days	14.5g	-Vomitting -Stomachache	-Increased liver enzymes -Hemostasis disorders	4,46	Severe	NAC for 72 hours Hemoabsorption	Survive

Conclusion

- Patients admitted to hospital for serious conditions includes cognitive disorder, respiratory distress, acute liver failure, acute renal injury, metabolic acidosis, coagulation disorder.
- The first two patients diagnosed with severe paracetamol poisoning were treated with oral NAC regimen for 72 hours. These patients got worse.
- Other patients diagnosed with severe paracetamol poisoning were treated with oral NAC regimen for 72 hours. The fourth patient who was intolerable to NAC, was transferred to a 20-hour intravenous NAC regimen. Especially, these cases are treated with hemodialysis and the patient were completely recovered.
- Hemoperfusion has been used for many years about removing toxins from the body. Clinical studies show the effectiveness of this techniques in clinical practice. In the future, there should be more clinical trials with larger sample in multi-center to assess better the applicability of this techniques.
- In addition, there should be specific standards for initiating treatment, recommendations in the process of treatment and other applications of hemoperfusion in clinical practice.

Reference:

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