

Paracetamol intoxication

Paracetamol is one of the most widely used analgesics - antipyretics (*Paralen®*). The acetanilide derivative contained in paracetamol is biotransformed in the liver by cytochrome P450 into highly hepatotoxic N-acetyl-p-benzoquinonimine , which is immediately inactivated by glutathione in therapeutic doses . When glutathione is depleted, hepatocytes are damaged and centrilobular necrosis occurs . A similar biotransformation takes place in the kidneys → also necrosis and kidney damage

Toxicity

- Already a dose higher than **140 mg/kg** (70 kg human – 20 tablets of *Paralen 500®* = hepatotoxic dose),
- children are less sensitive (they do not have functional cytochrome P450),
- more sensitive are alcoholics, patients on antiepileptics.

Clinical picture

- **Early symptoms** – nausea, vomiting,
- latency from ingestion (2–3 days) is typical,
- **hepatorenal stage** - symptoms of liver failure and renal failure, encephalopathy, rise in prothrombin time, metabolic acidosis, death.

Treatment

- Administer **activated charcoal**, suppress vomiting (metoclopramide),
- '*antidote* - *N-acetylcysteine* initial dose 140-150 mg/kg, continued dose 70 mg/kg, the dosage varies according to the time of intoxication and the method of administration.^[1]
- indication is suspicion of ingestion or paracetamol value in plasma 200 mg/l or more in 2 h after ingestion,
- hemoperfusion is also effective.

Links

Related Articles

- Antidepressant intoxication
- Benzodiazepine intoxication

Source

BENEŠ, Jiří. *Study materials* [online]. [cit. 24/02/2010].(<http://jirben.wz.cz/>)

References

- HODIS, Jiří. New facts about paracetamol, risks of overdose, intoxication and their management. *Practical Pharmacy* [online] . 2015, year 11, vol. 3, pages. 90-92, also available from <<https://www.praktickelekarenstvi.cz/pdfs/lek/2015/03/03.pdf>> . ISSN 1803-5329.

Used literature

- PELCLOVÁ, Daniela. *Nemoci z povolání a intoxikace*. 2. vydání. Praha : Karolinum, 2006. 207 s. ISBN 80-246-1183-X.
1. HODIS, George. New facts about paracetamol, risks of overdose, intoxication and their management. *Practical Pharmacy* [online]. 2015, y. 11, vol. 3, p. 90-92, Available from <<https://www.praktickelekaranstvi.cz/pdfs/lek/2015/03/03.pdf>> . ISSN 1803-5329.