

Critical care toxicology: from the management of acute poisoning to the investigation of the mechanisms of toxicity

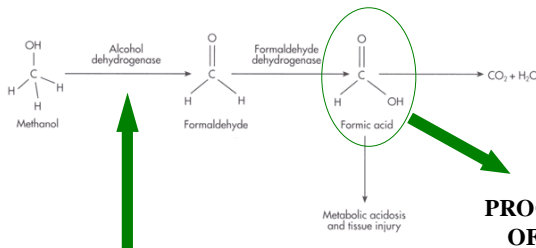
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Background: Acute poisoning is responsible for a significant number of deaths in the general population
Acute poisoning is mainly related to suicidal ingestion of pharmaceuticals, but also of household or industrial products
Intensive care management could influence the prognosis of life-threatening poisonings

WHAT IS THE ROLE OF A CLINICAL TOXICOLOGIST IN A HOSPITAL?

- RECOGNITION OF SEVERITY CRITERIA
- ACCURATE MANAGEMENT OF THE POISONED PATIENTS
- INVESTIGATION OF MECHANISMS OF TOXICITY
- DEVELOPMENT OF NEW THERAPIES



EXAMPLE: METHANOL POISONING

TREATMENT OF METHANOL POISONING=
BLOCKADE OF ADH

- EITHER BY ETHANOL (historical treatment)
- OR BY FOMEPIZOLE



- EVALUATION OF FOMEPIZOLE IN SPECIAL GROUPS:**
- PREGNANT WOMEN
 - CHILDREN



- EVALUATION OF FOMEPIZOLE KINETICS IN SERUM AND TISSUES**

OUTCOME?

- SURVIVAL OR
- DEATH...

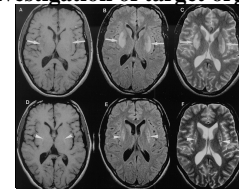
IS ORGAN DONATION POSSIBLE FROM METHANOL POISONED PATIENTS?

7 METHANOL POISONED DONORS LEADING TO 13 KIDNEY GRAFTS, 3 LIVERS, 2 LUNGS, 1 HEART

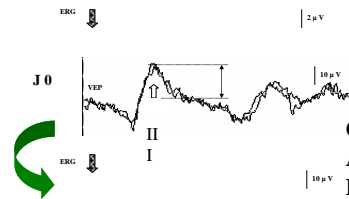
PROGNOSTIC VALUE OF FORMIC ACID CONCENTRATION ON

- ANALYSIS OF FORMATE KINETICS**
- HEMODIALYSIS
 - POSTMORTEM

Investigation of target organs



BRAIN AND MRI



OPTIC NERVE AND EVOKED POTENTIALS



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