

Neurotoxicity. Neuroleptics, antidepressants and sedative/hypnotics poisoning.

1. Neurotoxicity- definition, most common pathogenetic mechanisms

2. Neuroleptic toxicity

2.1. Indications of use and

\*acute psychotic states

\*basic knowledge of psychiatric disorders, anatomical and pathophysiological base of schizophrenia

\*dopaminergic pathways in CNS

2.2 Typical and atypical antipsychotics- types of medications and basic effects

2.3. Clinical presentation

\*extrapyramidal syndrome

\*neuroleptic malignant hyperthermia

2.4. Treatment approach

-ABCDE

-use of central acting anticholinolytics as antidotes

3. Antidepressants

3.1. Definition of depression

3.2. Major classes of antidepressants -examples

3.3. Tricyclic antidepressants

- example drugs

- clinical uses

-mechanism of action

-toxicokinetics

-clinical presentation and progression

\*cardiac and CNS toxicity

\*anticholinergic syndrome

\*serotonin effects

-treatment approach

\*ABCDE

\*nonspecific decontamination

\*drugs used as symptomatic treatment

\*the role of NaHCO<sub>3</sub>- criteria for use

### 3.4. SSRIs

-common drugs used in clinical practice

-toxicokinetics

-serotonin syndrome

-treatment approach

\*ABCDE

\*nonspecific decontamination

\*drugs used as symptomatic treatment

### 4. Sedative/hypnotic poisonings

4.1. Main examples of anxiolytics –barbiturates and benzodiazepines

- medications

-clinical indications

4.2. toxicokinetics

4.3. Toxicodynamics. GABA effects

4.4. Clinical presentation and progression of symptoms

4.5. Diagnostic tools

-toxanalysis

-hypnotic/sedative toxidrome

4.6 treatment approaches

-ABCDE

-nonspecific GIT decontamination- pitfalls

-specific antidote –Flumazenil

\*indications, contraindications, special warnings, dosing regimen

-forced alkaline diuresis and blood alkalization in barbiturate poisoning

### CLINICAL CASE

29 y/o female admitted on the toxicology ward after initial A&E assessment. Found in her flat drowsy, non-cooperative, GCS 12-13, with an empty bottle of wine and packs of Xanax 0,5mg with 50 tabs missing next to her bed. Paramedics tried to provoke vomiting at scene with a litre of water (unsuccessful, patient managed to sip around 500ml of it, but couldn't vomit) and gave her a dose of activated charcoal. Transported supine on the stretcher in the ambulance, vomitus found on the ambulance floor at arrival. Patient deteriorated in A&E, became comatose, satO<sub>2</sub> dropped to 81%, RR 13/min, BP 80/40, toxanalysis showed BZD level >5000.

a) what should be your initial course of action

b) what do you think the paramedics did wrong

c) what do you think might have complicated the intoxication

d) what antidote you might consider suitable

e) what further tests would you request

