

Antipsychotics (pediatrics)

Introduction

Among the antipsychotics that we historically call tranquilizers are **droperidol** (dehydrobenzperidol) and **phenothiazines** - eg chlorpromazine. These substances cause the **neuroleptic syndrome**, a state of emotional sedation, which is associated with reduced motor activity and an indifferent attitude towards the environment.

Antipsychotics are not anesthetics or sedatives/hypnotics. They do not cause amnesia or sleep, analgesia, or muscle relaxation. Most of the time they don't even alleviate the situational fear. They mainly focus on **psychiatric diseases**. In intensive medicine we use antipsychotics as **effective antiemetics** or **in conditions with high systemic peripheral vascular resistance**, when their application has a **vasodilating effect**.

Droperidol

Pharmacological effects

The substance causes **neuroleptic syndrome**. The patient appears calm on the outside, affective reactions are suppressed, motor movements are slowed down. Often **sleepiness** occurs, but the **patient** can always be **awakened** and responds to the challenge. However, some patients may react to droperidol with fear, confusion, dysphoria and inner restlessness.

Extrapyramidal disorders motility in the form of dyskinesias and parkinsonian muscle rigidity are not rare. The clinical significance is **antiemetic effect**, the suppression of central thermoregulation has the same significance. Antipsychotics can be prescribed in cases of mild hypothermia as they prevent muscle tremors.

Higher doses lead to **prolonged QT syndrome**. Blood pressure most often decreases as a result of a decrease in peripheral vascular resistance during α -receptor blockade. In hypovolemia or when droperidol is combined with fentanyl, the drop in blood pressure can be significantly stronger. In response to hypotension, the heart rate tends to tachycardia. Droperidol has **antiarrhythmic characteristic** and protects the myocardium from catecholamine-induced arrhythmias. **Respiration, liver function, and kidney are not affected.**

After injection, droperidol is rapidly distributed into the tissues, the biological effects can last up to 24 hours even after a single bolus dose. The **disadvantages** of droperidol include:

- absence, amnesia, analgesia, hypnotic effect;
- does not eliminate situational fear;
- extrapyramidal movement disorders;
- mood changes, confusion, fear;
- significant drop in BP in some patients.
- ⚠ **With prolongation of the QT interval the risk of torsade de points on ECG**

Droperidol dosage

The dose for droperidol (dehydrobenzperidol) is **0.15 mg/kg IV**. Repeated dosing is not recommended because droperidol has a **long-lasting effect**.

Contraindications

The most important contraindications of droperidol and other antipsychotics:

- Pheochromocytoma;
- Cerebral Palsy in Children and spastic conditions;
- hypovolemia;
- Shock;
- Cardiac conduction disorders (prolongation of the QT interval).

Links

Related Articles

- Psychopharmaceuticals
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- Inhalation Anesthesia (Paediatrics)
- Intravenous anesthetics (pediatrics)
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- Opioids (pediatrics)

Source

- HAVRÁNEK, Jiří: *Pharmacology in intensive care*.