**Paraldehyde**

**Comment**

Paraldehyde is a hypnotic that has been used primarily for the treatment of substance withdrawal seizures and status epilepticus. Today, the sole indication for paraldehyde is in the treatment of acute seizures or status epilepticus. The literature concerning efficacy comprises case reports and small case series, and there are no modern assessments or controlled studies. Paraldehyde probably has similar efficacy in acute seizures as benzodiazepines, barbiturates or phenytoin.

**Mechanism**

It is apparent that paraldehyde is highly effective in stopping seizures. The mechanisms underlying its anticonvulsant action are unclear.

**Usual dose**

Paraldehyde has a small but useful place in contemporary therapy in early status epilepticus as an alternative or sequel to BDZ. Advantages are little sedation or cardiorespiratory risk, and therefore it can be given rectally in situations where there are no facilities for resuscitation (e.g. at home or in residential institutions).

The usual rectal or intramuscular dosage is 5-10 mg (1 mg/mL) (adults) or 0.07-0.34 mg/kg (children). The dose can be repeated after 15-30 min. In contemporary clinical practice, IV and IM routes are rarely used.

**Important side effects**

The main toxicity risks result from the use of inappropriately diluted or decomposed paraldehyde. Paraldehyde has a short shelf life, and should not be exposed to light. The decomposed compound can result in precipitation, microembolism, thrombosis or cardiovascular collapse. The drug also reacts with rubber and plastic, therefore intravenous infusions must be given via glass sets and syringes.

Direct injury from arterial injection leading to both arterial and venous thrombosis has been reported. IM injection is extremely painful and can result in a sterile abscess and inflammatory response.