Midolam®

Midazolam

Description
Midolam® is a preparation of midazolam, a benzodiazepine derivative. It is used as a premedicant and sedative in surgical and other procedures and for the indication of anaesthesia. It is a rapidly acting hypnotic with a short biological half-life. Midazolam reduces sleep onset time and prolongs sleep without quantitatively impairing REM sleep, waking phases are reduced and sleep efficiency is improved. It has also anticonvulsant, anxiolytic and muscle-relaxant properties.

Mode of action
It is thought that the actions of benzodiazepines such as midazolam are mediated through the inhibitory neurotransmitter gamma-aminobutyric acid (GABA), which is one of the major inhibitory neurotransmitters in the brain. Benzodiazepines increase the activity of GABA, thereby producing a calming effect, relaxing skeletal muscles, and inducing sleep. Benzodiazepines act as agonists at the benzodiazepine receptors, which form a component of the benzodiazepine-GABA receptor-chloride ionophore complex. Most anxiolytics appear to act through at least one component of this complex to enhance the inhibitory action of GABA.

Pharmacokinetics
Midazolam is absorbed rapidly after oral administration (absolute bioavailability of the midazolam syrup in pediatric patients is about 36%, and intramuscular is greater than 90%). Midazolam is primarily metabolized in the liver and gut by human cytochrome P450 IIIA4 (CYP3A4) to its pharmacologic active metabolite, (alpha)-hydroxymidazolam, and 4-hydroxymidazolam. Half-life of Midazolam is 2.2-6.8 hours and protein binding is 97%.

Composition
Midolam® 7.5 mg Tablet: Each film-coated tablet contains Midazolam BP 7.5 mg.
Midolam® 15 mg Tablet: Each film-coated tablet contains Midazolam BP 15 mg.
Midolam® 5 mg/1 ml Injection: Each 1 ml ampoule contains Midazolam BP 5 mg as Midazolam Hydrochloride.
Midolam® 15 mg/3 ml Injection: Each 3 ml ampoule contains Midazolam BP 15 mg as Midazolam Hydrochloride.

Indications
● Sedation with amnesia. ● Sedation in premedication and induction of anaesthesia before surgical or diagnostic procedures. ● Short-term treatment of sleep disturbances of clinically significant severity. ● Disturbances of sleep pattern, difficulty in getting to sleep, and difficulty in getting back to sleep after premature waking.

Dosage & administration
Oral dosage: For adult 7.5-15 mg daily. In elderly and debilitated patients, the recommended dose is 7.5 mg. In premedication, 15 mg of Midazolam should be given 30-60 minutes before the procedure.
Intravenous administration:
● Endoscopic or cardiovascular procedures:
In healthy adult the initial dose is approximately 2.5 mg. In cases of severe illness and in elderly patients, the initial dose must be reduced to 1 to 1.5 mg.
● Induction of Anesthesia: The dose is 10-15 mg i.v.
Intramuscular administration: Adult: 0.07-0.1 mg/Kg bodyweight i.m. Usual dose is about 5 mg. Children: 0.15-0.20 mg/Kg

Rectal administration in children:
For preoperative sedation, rectal administration of the ampoule solution (0.35-0.45 mg/Kg) 20-30 minutes before induction of general anesthesia.

Contraindications
● Hypersensitivity to midazolam or other benzodiazepines. ● Patients with a history of alcohol and / or drug abuse or dependency. ● Severe respiratory depression. ● Acute pulmonary insufficiency. ● Sleep apnea syndrome. ● Severe hepatic impairment. ● Myasthenia gravis.

Side effects
Tiredness, drowsiness, muscle weakness, confusion, ataxia (especially in the elderly) and amnesia. These effects occur predominantly at the start of treatment and generally disappear with dose reduction or continuation of therapy.

Use in pregnancy & lactation
There is clear evidence that the use of benzodiazepines during pregnancy endangers the human fetus. Therefore midazolam should not be taken during pregnancy, especially the first trimester, unless there is a compelling indication for its use and no safer therapeutic alternative is available. Midazolam is excreted in breast milk and can cause drowsiness and poor feeding in the infant. Therefore, midazolam should not be taken by nursing mothers.

Precautions
Where treatment is given concomitantly with CNS depressant medications or in general with substances such as erythromycin, azole-type antimycotics and cimetidine that interfere with the metabolism of midazolam by cytochrome P-450 3 A, cautions should be taken. Administration of midazolam concomitantly with other centrally acting medications should be avoided and patients should be warned against simultaneous consumption of alcohol, because combination can potentiate the undesirable effects of both substances. All anxiolytics and hypnotics can precipitate coma. So it should be avoided in case of severe hepatic impairment. As with all hypnotics, sedatives and tranquilizers, prolonged treatment can lead to drug dependence in predisposed patients.

Drug interactions
Midazolam can enhance the central sedative effect of neuroleptics, tranquilizers, antidepressants, sleep-inducing drugs, analgesics, anaesthetics, antipsychotics, anxiolytics, antiepileptic drugs and sedative antihistamines.

Storage
Keep out of reach of children. Store in a dry place, below 25˚C temperature and protected from light.

Packaging
Midolam® 7.5 mg Tablet: Each carton contains 10X3 tablets in blister pack.
Midolam® 15 mg Tablet: Each carton contains 10X2 tablets in blister pack.
Midolam® 5 mg/1 ml Injection: Each carton contains 1X1 ampoule with a sterile disposable syringe.
Midolam® 15 mg/3 ml Injection: Each carton contains 5X1 ampoules.

Opsonin Pharma
Ideas for healthcare

Manufactured by
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