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Benzodiazepines

- a- Diazepam (Diazem®): The most commonly used benzodiazepine in small and large animals. Parenteral preparations of water-insoluble diazepam contain propylene glycol and ethanol. Since it is not a soluble agent, it should not be mixed with other drugs. Intramuscular administration of this agent is not highly recommended; because absorption is weak and it might irritate the tissues. Since it is light sensitive, it should not be stored in plastic injectors after use. Diazepam is preferred as a muscle relaxant and anticonvulsant in dogs, cats and horses. Relieves fear and excitement, creates hypnosis. It is used for premedication before ketamine in dogs and horses, and to relieve convulsions in ketamine induction in cats. It prolongs postoperative sedation especially in dogs. It can be given i.v at least 1mg/kg /h in the first 6 hours. Doses according to animal species: Dog: 0.1-0.5 mg / kg iv Cat: Dog dose. Horse: 0.05-0.2 mg / kg iv Bovine: 0.5-1.1 mg / kg im. Sheep-goat: 0.5-1.1 mg / kg im. Poultry: 5.5-11 mg / kg im. Pig: 0.5-10 mg / kg im.
- b- Midazolam (Dormicum®): In contrast to its widespread use in human medicine, it is the least used sedative in veterinary

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medicine. Although it is not a reliable sedative in cats and dogs, it provides excellent sedation in some small mammals (rabbits, ferrets), large mammals (pigs), and most bird species. Unlike diazepam, midazolam is not irritating and is well absorbed after intramuscular administration. Midazolam, used as a perioperative sedative and muscle relaxant in the aforementioned animal species, can be used in combination with ketamine for induction of anesthesia in elderly and weak dogs. Doses according to animal species: Dog: 0.2-0.4 mg / kg i.v., i.m. Cat: 0.1-0.3 mg / kg iv, im Rabbit: 0.5-1.0 mg / kg i.m. Pig: 0.1-0.2 mg / kg i.m. Sheep: 4mg / kg i.v

- c- **Climazolam** It is a fast, strong benzodiazepine. Widely used in cattle, sheep, horses and dogs. If given 5 mg / kg orally in cattle; sedation with ataxia. If administered at lower doses i.v or i.m, it causes mild sedation.

α 2 Adrenoreceptor agonists

- a- **Xylazine** (Rompun®, Alfazyne®): The agent, originally synthesized in West Germany in 1962, was used as an antihypertensive agent in humans and its sedative effect was subsequently recognized in animals. Today, it is used as a preanesthetic in the majority of animal species. In addition to

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its sedative effect, it provides analgesia, muscle relaxation and prevents muscle stiffness caused by ketamine. It also reduces the dose of all injectable and volatile anesthetics. Xylazine causes a decrease in heart rate; may cause sinus bradycardia and atrioventricular block. Although a short-term increase in blood pressure occurs after administration of the drug, xylazine causes hypotension. Salivation reduces gastric secretion and gastrointestinal motility and causes vomiting in cats and dogs. Reduces swallowing reflex. Creates deep sedation in cats, dogs, foals and small ruminants. Although it crosses the placenta, it has not been reported to cause abortion in cats, dogs and mare; however, it can cause premature labor in cattle. It causes hypotension, bradyarrhythmia, decreased tissue perfusion and respiratory depression, ataxia in large animals, perspiration in horses and promotes diuresis in animal species. Horses; 15-20 min after induction of anesthesia. 2 mg / kg i.m, 0.3-1.1 mg / kg i.v. as applied. In cattle; 0.05-0.2 mg / kg i.m. 10-20 min. then lies, provides deep sedation. It takes 30-35 minutes. It takes 7 hours or more to fully recover. In sheep and goats; 0.2 mg / kg i.m is administered. However, in some very sensitive goats, application of 0.05 mg / kg will cause deep sedation extending

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to 12 hours. For this reason, it should be given in a very slow and controlled manner at a dose of 0.05-0.1 mg / kg. Doses according to animal species: Dogs: 1-3 mg / kg im Cats: 1-3 mg / kg im Pig: 2-3 mg / kg im Poultry: 5-10 mg / kg im Effect might be antagonized with yohimbine, atipamezole (Antisedan®) or tolazoline.

- b- b- Detomidine (Domosedan®): An expensive agent used in horses for analgesia and sedation. It is especially suitable for attempts on standing position. When combined with opioids, especially butorphanol, it gives more satisfactory results. It should be used with caution in animals having cardiovascular disorders. Doses according to animal species: In horses: For mild sedation; 20-40 mcg / kg im, iv (0.2-0.4 ml / 100 kg) Moderate; 40-80 mcg / kg im, iv (0.4-0.8 ml / 100 kg) Deep sedation; 80-150 mcg / kg im, iv (0.8-1.5 ml / 100 kg) (when used at doses above 60 mcg / kg, it causes horses to lie down) Cattle: 10-40 mcg / kg i.v., heavily. Dog: 5-20 mcg / kg
- c- c- Medetomidine (Domitor®): One of the newest α_2 agonists used in veterinary medicine. It is more powerful than other agents in its class; because it is lipophilic and is eliminated very quickly. In animals, it can cause significant bradycardia immediately after administration. If administered

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intramuscularly, side effects will develop at a low level. It is metabolised in a similar way to Xylazine. It has been reported to cause vomiting in 10% of dogs and 50% of cats injected. When medetomidine is administered intramuscularly, the effect starts within 5 minutes in dogs and 15 minutes in cats and provides sedation for 1-2 hours in both animal species. Analgesic strength is also effective during this time. Medetomidine injection contributes greatly to reducing the dose of injectable and inhalant anesthetics. The effect can be antagonized with yohimbine, atipamezole (Antisedan®) or tolazoline. Doses according to animal species: Cat: 80-150 mcg / kg im (0.05-0.12mg / kg iv, im) Dog: 40 mcg / kg im, 20 mcg / kg iv (0.01-0.05 mg / kg iv, im) Dosing information on the package insert must be observed. Sheep-cattle: 10-20 mcg / kg iv Horse: 10-30 mcg / kg d- Romifidine Atta max. dose 80 mcg / kg iv