PREMEDICATION IV

C- Narcotic Analgesics:

(See also Perioperative Analgesia section)

a- Morphine: A narcotic analgesic that is widely used in treatment of severe pain. It causes depression of the central nervous system including the centers of respiratory and cough reflex. Also; It causes constipation by reducing gastrointestinal movements, causes spasm in the biliary tract, narrows the bronchi and reduces the metabolic rate. It has sedative and strong analgesic effects. Since morphine often causes vomiting, it is contraindicated in intraocular surgical procedures. It is also contraindicated in bronchial asthma, intracranial lesions, ureter obstruction and respiratory tract narrowing. It should be kept in mind that in patients with morphine, excessive depression of the cough reflex and pulmonary secretions may accumulate in the postoperative period and this may lead to atelectasis especially in patients with lung disease. Morphine injections should not be used if other medulla spinalis stimulants are used, as it stimulates the reflex centers in the medulla spinalis. Otherwise, it causes spinal convulsions. The effect of low doses on cardiovascular system in dogs is minimal. However, high doses cause

bradycardia and hypotension. Horses; hypertension can be seen with minimal changes in heart beat.

Generally, when pain occurs, it provides good analgesia in most animal species at a dose of 0.1-0.3 mg / kg in i.m injection for up to 4 hours. But in cats limited dose; 0.1 mg / kg. When morphine is given iv, it causes excitement, bradycardia and histamine release.

b- Fentanyl: It is 50-125 times stronger than Morphine. High doses are sufficient for surgical procedures. I.m, i.v, s.c. Mucous membranes are rapidly absorbed. In IV injection, the effect is observed in 4-7 min. Fentanyl is an ideal agent in dogs, rats, sedation and myosis; excitement and mydriasis occur in mice, cats and horses. Causes significant locomotor muscle reactions in horses (transient rigidity). Respiratory depression and decrease in pulse. However, it has slight effect on cardiovascular system. Its strong cholinergic effect is blocked by anticholinergics, for example atropine. In addition, the use of muscle relaxants during surgery removes the muscle rigidity that may be caused by fentanyl. In dogs: dose is 0.001 - 0.007 mg / kg i.v. The effect is 20-30 min.

c- Fentanyl derivatives:

1- Alfentanyl

PREMEDICATION IV

2- Sufentanyl

3- Carfentanyl

4- Remifentanyl

d- Meperidine hydrochloride (Dolantine®, Demerol®, Pethidine®): It has analgesic, sedative and spasmolytic properties. It causes dry mouth, euphoria, vomiting and minimal respiratory depression. Meperidine greatly reduces corneal sensitivity. Its effect is 10 times less than morphine. Unlike morphine, intestinal spasm is beneficial in spasmodic colic in horses. Causes vomiting in dogs and cats, minimally affects the cough center. The effect on arterial blood pressure is poor in i.m. injection. But it is a strong histamine release. It causes severe hypotension in i.v injection in dogs. In large animals: 1 mg / kg i.m. Dogs: a dose of 1-2 mg / kg i.m leads to successful analgesia. Cats: 10-20 mg (total dose) can be given by i.m. The effect of these doses on painful animals is 1.5-2 hours.

D- **ANTICHOLINERGIC AGENTS**

a- Atropine: A vagolytic agent, blocks acetylcholine at the myoneural junctions of the autonomic nervous system cholinergic fibrils. This substance reduces secretion of respiratory mucosa. It dilates the bronchi and prevents

laryngospasm in endotracheal intubation. It reduces motoric and secretory formations in gastro-intestinal organs. Prevents vagal inhibition of heart, increases heart rate. It does not change blood pressure when given in therapeutic doses. It also blocks cholinergic fibrils of short ciliar nerves. Relaxes iris sphincters and as a result; creates mydriasis. There are no dilatator effects on pupilla in poultry because; iris striated muscles in poultry. In cats, rabbits and mice, most of the atropine is destroyed by the enzyme atropinesterase in the liver. Atropine is used as a premedication agent in all general anesthetics. Atropine can generally be administered by s.c or i.v for faster action. It is a general rule that this preparation should be used 15-45 minutes before the operation. Some drugs used in anesthesia are ot vagotonic, and they cause bradycardia. Bradycardic effects of these drugs are prevented by atropine. In dogs: 0.02-0.05 mg / kg In cats: 0.1-0.3 mg / kg In pigs: 0.3-1.8 mg / kg In horses: 10-60 mg (total dose) or 0.04- 0.08mg / kg In the cattle: It makes the saliva sticky and not recommended for use.

b- Scopolamine (Hyoscine) is an alkaloid similar to Atropine. The mode of action is like atropine. The drying effect is superior to atropine. Its central effect is greater than atropine.

PREMEDICATION IV

For premedication in dogs: 0.2-0.4 mg, usually used with Papaveretum (Omnopon-Scopalamine-Roche). This preparation contains 20 mg Papaveretum and 0.4 mg Hyoscine per ml.

c- Glycopyrolate (Robinul®): A synthetic Anticholinergic drug. It antagonizes “muscarinic” effects such as bradycardia, bronchospasm, excessive secretion in bronchi and intestinal hypermotility. Dosage: half of atropine. less tachycardia than atropine. However, it has more protective effect against vagal bradycardia. In small animals, the dose is 0.01-0.02 mg / kg. Dose in large animals: 0.03-0.06 mg / kg.