

# **Preanesthesia**

## **(Premedication)**

### **Introduction**

- Preanesthetic medication or 'premedication' is used to help both the anesthetist and the animal.
- Premedication implies administration of sedatives, tranquilizers and analgesics with or without anticholinergics before anesthetic induction.
- Premedication is aimed to
  1. Relieve anxiety thus apprehension, fear and resistance to anesthesia.
  2. Counteract unwanted side effects of agents used in anesthesia.
  3. Reduce the dose of anesthetic.
  4. Provide extra analgesia.

### **Special note:**

- Modern methods of obtaining balanced anesthesia have "clouded the issue" as to the aims and the exact nature of premedication, because they have, to some extent, made difficult the definition of anesthesia. For example, if a low dose of medetomidine and ketamine combination is given IM to a cat then, once the cat is sedated prior to anesthetic induction/maintenance, this mixture is a premedicant. However, if a high dose of medetomidine and ketamine combination is given IM and the cat becomes anesthetized, is the mixture still a premedicant?
- The definition is unimportant, as long as the part which each drug (premedicant or anesthetic) plays in the production of suitably balanced anesthetics, and in the reduction of unwanted side effects.

- The sedative and anxiolytic drugs play the major role in premedication by improving the quality of anesthesia and recovery and counteracting unwanted side effects such as ketamine-induced muscle rigidity.
- The type of sedative drug chosen for premedication depends on a variety of factors such as species, health status, procedures and age.
- Anticholinergics such as atropine and glycopyrrolate may be used as premedicant to avoid excessive salivation, bradycardia and hypotension.
- There is no premedicant or combination of drug protocols that can safely and routinely administered to all patients
- Type of surgery, duration of procedure, anticipated complications, postoperative needs, age, temperament and physical condition should all be carefully considered in the choice of premedicants.
- Sound understanding of premedication pharmacology helps avoid dangerous dosing and choice, and increase the safety of anesthetic management
- In clinical situation, is most commonly practiced in preanesthetic medication is to provide more than one class of drugs to achieve sedation and analgesia.
- This technique is termed as ***neuroleptanalgesia***, which is defined as “a state of quiescence, altered awareness, and analgesia produced by the administration of a combination of a neuroleptic agent and a narcotic (opioid) analgesic”.
- In the next lecture provides a brief pharmacological description of various drugs used as premedicants.

**Clinical Notes**

- A number of agents and techniques are available for premedicating animals, but the choice would depend on the patient's physical state and the type of procedure.
- It must be remembered numerous combinations exist depending on the circumstances, and a good review of the major pharmacological features of the drugs, as well as the important concerns for the fragile patient will help guide the practitioner in avoiding complications.
- In animals under premedication that are still conscious, anesthetic monitoring is not usually carried out to the standard applied in animals under general anesthesia (see Anesthetic monitoring notes).
- However, vigilant monitoring of cardiopulmonary system is encouraged as often as possible in severely sedate or unconscious animals under the influence of premedicants.

**Classification of preanesthesia (6A) :-**

1. Anxiolytic like benzodiazepine (temazepam and lorazepam) cause two effects, amnesia and sedation for the animals.
2. Amnesia like midazolam.
3. Anti-emetic like metoclopramide and neostigmine use to prevent nausea and vomiting.
4. Antacid like oral sodium citrate and H<sub>2</sub>-antagonist (Ranitidine and Omeprazole) use for prevention gastric acidity to avoid aspiration and regurgitation.
5. Anti-cholinergic like atropine to prevent or reduce secretion and bradycardia.
6. Analgesia like xylazine and fentanyl as pain killer.