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The general anesthesia method, which is applied by using multiple agents from different pharmacological classes, is called "**balanced anesthesia**".

General anesthetics can create analgesia and muscle relaxation in addition to their anesthetic effects. However, tendency to achieve analgesia or other effects with general anesthetics might result in an uncontrollably deeper anesthesia. Likewise, the recommended doses of anesthetics would not often produce adequate muscle relaxation. Each general anesthetic has different side effects besides the desired effects. Anesthetic agents can be combined with each other to eliminate these side effects. In addition, anesthesia can be perfected with other agents (analgesic, muscle relaxing, etc.) to be administered preoperatively or intraoperatively to the patient.

The administration of one or more preparations to the patient before general anesthesia is called "**premedication**".

Preanesthesia or premedication; allows an easier anesthesia induction, maintanance, and increases the comfort and safety for anesthesiologist.

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Intended uses of preanesthetics:

1- To reduce the amount of anesthetic substance to be given, by slowing down the metabolism,

2- Tranquilizing the animal to be anesthetized, to eliminate excessive effort and defensive movements,

3- To reduce the salivation and bronchial secretion that creates a risk of obstruction in the respiratory tract during anesthesia, to reduce intestinal movements and to prevent vomiting of the patient,

4- To provide anesthesia and recovery without pain or excitation.

Preanesthetics to be used for premedication are grouped according to their pharmacological effects as follows:

A- Sedatives

B- Tranquilizing agents (neuroleptics)

C- Narcotic analgesics

D- Anticholinergics

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A- Sedatives

Barbiturates

a- Pentobarbital sodium (Nembutal®) and Secobarbital sodium (Secobal®): When used alone or in combination with atropine, thewse barbiturates provide moderate sedation with minimal depression in respiration when administered intramuscularly at a dose of 4mg/kg 30-60 minutes before anesthesia in cats and dogs. If 20% sol. is given to cattle 1-2 g/500 kg i.v. slow injection, it calms them. In horses: 0.5-1.1 mg/kg iv is suggested.

b- Phenobarbital sodium (Luminal®, Luminaletten®): It is a long-acting barbiturate and has been popular for its success in the long-term treatment of various convulsions. It is an inexpensive agent commonly used for the treatment of epileptic seizures and convulsions caused by distemper encephalitis. In a dog weighing 10 kg, it can be given 1 g initially and then tid, ¼ g each time.

c- Chloralhydrate: It is considered as the oldest and best hypnotic drug that is trusted and well tolerated in human medicine, can be used in horses and cattle for premedication in veterinary medicine. Horses; 3 g/50 kg i.v. provides sedation and mild analgesia. If both horses and cattle are

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given orally at 3-6 g/50 kg, low levels of sedation and even mild anesthesia occur. Can also be used in sheep and goats.