

INTRODUCTION TO VETERINARY ANESTHESIA

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موعد المحاضرات يوم الخميس من الساعة ٢,١٥-٣,١٥ م – مدرج الجراحة

الموضوع	المحاضر	التاريخ
Introduction to anesthesia	إ.د أشرف سعده	الأسبوع الأول ٢٠١٩/٩/٢٦
Pre-anesthetic medications	إ.د فيصل عبد الصمد	الأسبوع الثاني ٢٠١٩/١٠/٣
Analgesia-Pain control		الأسبوع الثالث ٢٠١٩/١٠/١٠
Injectable anesthesia		الأسبوع الرابع ٢٠١٩/١٠/١٧
Injectable anesthesia		الأسبوع الخامس ٢٠١٩/١٠/٢٤
Inhalation anesthesia		الأسبوع السادس ٢٠١٩/١٠/٣١
Resuscitation & Different regimens of anesthesia		الأسبوع السابع ٢٠١٩/١١/٧
X-ray production	د. إلهام عبد الجواد	الأسبوع الثامن ٢٠١٩/١١/١٤
X-ray interpretations		الأسبوع التاسع ٢٠١٩/١١/٢١
Ultrasound physics	د. أحمد إسماعيل	الأسبوع العاشر ٢٠١٩/١١/٢٨
Ultrasound interpretations		الأسبوع الحادي عشر ٢٠١٩/١٢/٥

مواعيد الحصص العملية أيام الثلاثاء والأربعاء والخميس من كل إسبوع

الموضوع	التاريخ
1- Injections: I/M, I/V, I/D, S/C, I/Articular (Carpal and Stifle In Equine), Oral And Rectal Administrations (Indication, Techniques, and Complications).	الأسبوع الأول ٢٠١٩/٩/٢٤
2- Local Analgesia: Topical Administration, Linear Infiltration, Inverted-L and Ring Block (Agents, Mechanism of Action, Potentiation of Action (Epinephrine, <u>Hyaluronidase</u>) & Toxicity.	الأسبوع الثاني ٢٠١٩/١٠/١
3- Regional Analgesia: <u>Comual</u> (Ox, sheep and SGoat), Paravertebral, Palmar and Planter <u>Nb</u> & Intravenous Regional Analgesia (Indications, Anatomical Consideration & Techniques).	الأسبوع الثالث ٢٠١٩/١٠/٨
4- Spinal Analgesia (Epidural): Indications, Anatomical Considerations, Techniques (Cattle, Buffalo, Goat, Donkey), Potentiating of Action (Synergism) and Complications.	الأسبوع الرابع ٢٠١٩/١٠/١٥
5- Premedication + Injectable Anesthesia: Anticholinergic (Before, After), Tranquilizers (Before, After). <u>Induction</u> of General Anesthesia (Ketamine, Thiopental, <u>Propofol</u>)--- Estimation of Depth of Anesthesia (Reflex Estimation).	الأسبوع الخامس ٢٠١٩/١٠/٢٢
6- Inhalation Anesthesia: Agents, Technique, Intubation, Complications and Emergency	الأسبوع السادس ٢٠١٩/١٠/٢٩
Revision	الأسبوع السابع ٢٠١٩/١١/٥
8- X-Ray Films: (X-Ray Machine - Positioning (Lateral, <u>Ventro</u> -dorsal, A/P, Oblique & Oral views), Processing in Dogs (Bone, Chest, Abdomen) and Equine	الأسبوع الثامن ٢٠١٩/١١/١٢
9- Interpretation of X-Ray Film: (Species, Radiographic Views, Anatomical Radiography (Normal Fore and Hind Limbs, Chest, Abdomen, Skull of Dogs and Limbs In Equine)	الأسبوع التاسع ٢٠١٩/١١/١٩
10- Ultrasound: Ultrasound Machine – Abdominal Examination and Imaging of <u>Ub</u> , Kidney, Stomach, Intestines, Spleen, Prostate and Liver - Artifacts	الأسبوع العاشر ٢٠١٩/١١/٢٦
Revision	الأسبوع الحادي عشر ٢٠١٩/١٢/٣

VETERINARY ANESTHESIA

- ✘ Anesthesia means production of reversible insensibility to pain.
- ✘ It produces safe and effective chemical restraint for medical or surgical procedures with minimal pain, stress and toxic effects to the patient or anesthetist.

VETERINARY ANESTHESIA

✘ Indications of anesthesia:

1. Humanitarian handling of the patient.
2. Technical efficiency through the following:
 - Overcome the fear of animals.
 - Safety of the animal and surgeon.
 - Analgesia and muscle relaxation.
 - Good restraint of the animal during operation.

VETERINARY ANESTHESIA

✘ Some anesthetic terms:

- **Akinesia:** Loss of motor response (movement) due to motor nerve paralysis.
- **Analgesia:** Absence of pain.
- **Local anesthesia:** Loss of sensation in a defined body area without loss of consciousness.
- **Regional anesthesia:** Loss of sensation in a body region without loss of consciousness.

VETERINARY ANESTHESIA

- **General anesthesia:** Loss of consciousness with analgesia and muscle relaxation.
- **Surgical anesthesia:** A stage of general anesthesia allows efficient surgery without pain or movement of the patient.
- **Balanced anesthesia:** Surgical anesthesia produced by more than one drug or anesthetic technique to achieve optimal analgesia and muscle relaxation.

VETERINARY ANESTHESIA

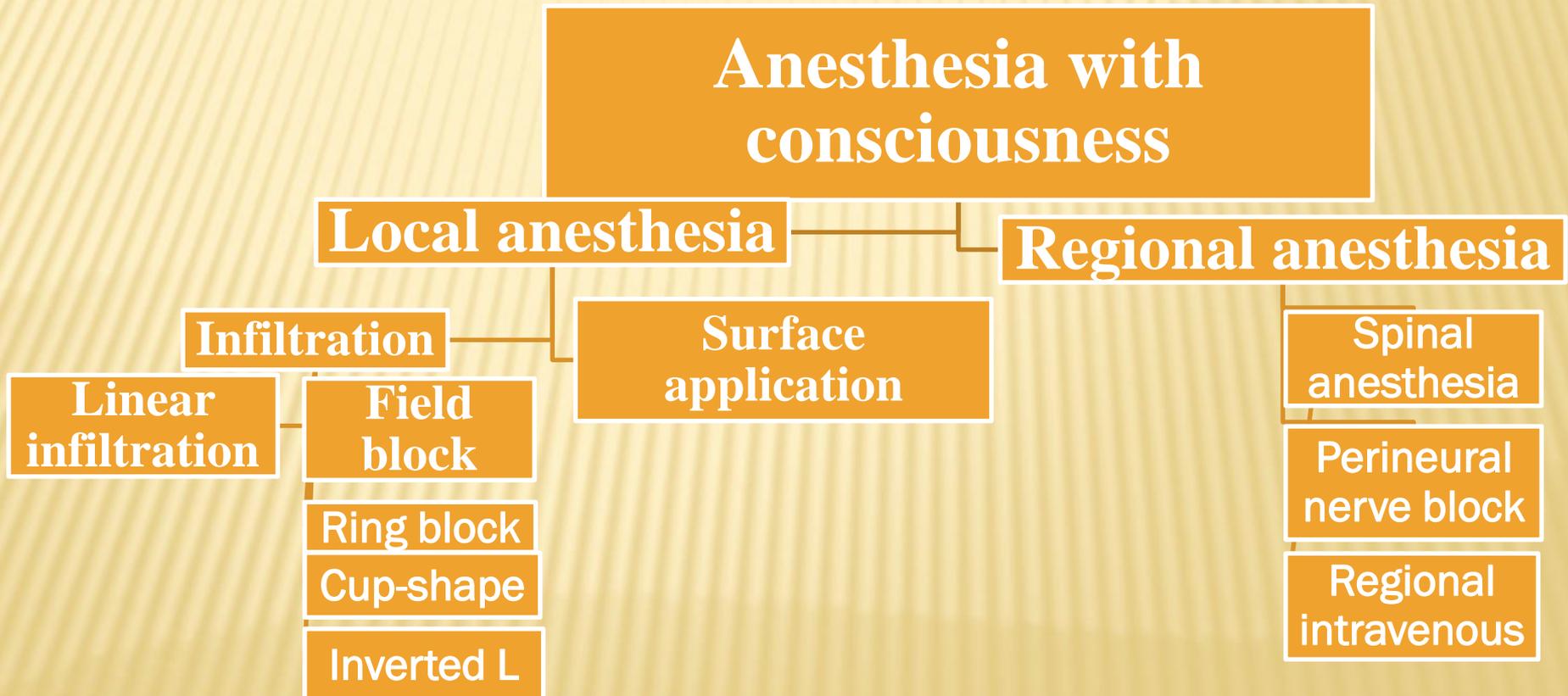
- ✘ **Dissociative anesthesia:** A similar state of anesthesia characterized by catalepsy (rigidity of the limbs), peripheral analgesia, altered consciousness and the animal dissociated from its environment. Ketamine HCl is an example.
- ✘ **Sedation:** Mild depression of CNS and the animal is conscious and calm.
- ✘ **Tranquillization:** Sedation - consciousness - relaxation and unconcerned with surroundings.

VETERINARY ANESTHESIA

- ✘ **Hypnosis:** Artificially induced sleep from which the animals can be awaked by stimuli.
- ✘ **Narcosis:** A sleep-like state with various degrees of analgesia.

VETERINARY ANESTHESIA

× Types of anesthesia:



VETERINARY ANESTHESIA

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graph TD; A[Anesthesia with unconsciousness] --> B[Injectable general anesthesia]; A --> C[Inhalation general anesthesia]; A --> D[Combination of both types]
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Anesthesia with unconsciousness

**Injectable general
anesthesia**

**Inhalation general
anesthesia**

Combination of both types

VETERINARY ANESTHESIA

✘ **Criteria for selection of anesthetic drugs and techniques:**

- 1- Species of the animal (Due to its size, temperament, anatomical and physiological considerations).
- 2- Condition of the animal.
- 3- Nature of the operation (Site, duration and magnitude [major or minor operations]).

VETERINARY ANESTHESIA

- 4- Availability of facilities and anesthetic equipment.
- 5- Safety of anesthetic agents.
- 6- Cost of anesthesia.
- 7- Availability of trained assistants.
- 8- Personal knowledge and experience of the anesthetist.

VETERINARY ANESTHESIA

✦ Examination of the animal before anesthesia:

The followings are essential for a good anesthetic risk

- Case history.
- General condition (Body temperature - Pulse and Respiratory rates).
- Blood and urine analyses.
- Liver and kidney function tests.

VETERINARY ANESTHESIA

- ✦ **Patient evaluation (Physical status):**
 - **Class I (Excellent): No systemic diseases**
 - **Class II (Good): Mild systemic disease**
 - **Class III (Fair): Severe systemic disease with limited activity but not incapacitating**
 - **Class IV (Poor): Incapacitating systemic disease**
 - **Class V (Critical): Moribund animal.**

VETERINARY ANESTHESIA

- ✘ **Preparation of the animal for general anesthesia:**
 - Withholding the food for 12-24 hours before the general anesthesia.
 - Withholding water for 1-2 hours.
 - Correction of dehydration, anemia, cardiac, respiratory and renal dysfunctions, and body temperature.

VETERINARY ANESTHESIA

- Reinforcement of hepatic detoxicating power in toxemic animals (By glucose 3-4 days before surgery).
- Administration of preanesthetic drugs such as anticholinergic drugs and tranquillizers.



**THANK
YOU**