

28421 - General Surgical Pathology: Surgery and Anaesthesiology

Syllabus Information

Academic year: 2023/24

Subject: 28421 - General Surgical Pathology: Surgery and Anaesthesiology

Faculty / School: 105 - Facultad de Veterinaria

Degree: 451 - Degree in Veterinary Science

ECTS: 7.0

Year: 3

Semester: Annual

Subject type: Compulsory

Module:

1. General information

Some of the diseases and injuries that afflict our patients are treated surgically and require an anaesthetic procedure.

The objectives of this subject are:

- To know the diseases and injuries in which surgery may be indicated as therapy and its repercussion on the patient (Surgical Pathology).
- To know the surgical therapy with its protocols and techniques, as well as the acquisition of basic manual skills used in any surgical act (Surgery).
- The study of clinical anaesthesiology, from pre-anaesthetic assessment to anaesthetic discharge, including general and loco-regional anesthesia guidelines and patient monitoring in order to prevent, detect and treat complications that may occur during anesthesia.

These approaches are aligned with Sustainable Development Goals (SDGs) 3, 4, 5, 8, 9, 10,12 and 13 of the United Nations 2030 Agenda.

2. Learning results

1. Understand the patient's body's response to trauma, especially surgical trauma, both locally and systemically.
2. Explain the main complications derived from surgical treatment, how to recognize, prevent and treat them through adequate perioperative care.
3. Recognize and handle basic surgical instruments and material.
4. Know and apply the protocols for preparing a surgical intervention (surgical field, preparation of the operating room, instruments and material and preparation of the surgical staff)
5. Correctly perform basic surgical techniques (incision, dissection, suturing and haemostasis).
6. Know the basic surgical techniques for the resolution of diseases or injuries of domestic animals, both those involving soft tissues and those of traumatology and orthopaedics.
7. Assess the anaesthetic risk presented by a given patient.
8. Understand the theoretical and practical basis of clinical anesthesia, both general and locoregional.
9. Monitor the anesthetized patient correctly and interpret the results in order to detect and treat the most common anaesthetic complications.
10. Design anesthesia guidelines appropriate for different species and clinical situations.
11. Recognize pain in the anesthetized and post-operative patient, designing analgesia guidelines adapted to each case.

3. Syllabus

THEORETICAL PROGRAM: It will consist of 40 sessions in which the following topics will be addressed:

Topic 1. Presentation of the subject.

Topic 2. Preoperative assessment of the patient. Anesthetics risk

Topic 3. Premedication. Induction. Anaesthetic maintenance

Topic 4. Intraoperative monitoring

Topic 5. Complications of anesthesia

Topic 6. Analgesia

Topic 7. Surgical instruments, suture materials, electrosurgery.

Topic 8. Surgical asepsis, sterilization and disinfection, maintenance of the surgical environment.

Topic 9. Basic surgical techniques, handling of instruments, incision, dissection, haemostasis, suturing.

Topic 10. External trauma.

Topic 11. Patient response to trauma. Tissue repair.

Topic 12. Patient response to trauma. Minimization of surgical stress.

Topic 13. Basic principles of skin surgery.

Topic 14. Reconstructive surgery.

Topic 15. Cures and drains.

Topic 16. Indications and access to the abdominal cavity.

Topic 17. Surgical techniques in abdominal organs: hollow and solid organs. Indications.

Topic 18. Surgical sterilization in the male.

Topic 19. Surgical sterilization in the female.

Topic 20. Abdominal hernias.

Item 21. Access to the thoracic cavity.

Item 22. Oncologic Surgery.

Topic 23. Minimally invasive surgery.

Topic 24. Pathology of osteoarticular diseases. Fundamentals of orthopaedic surgery and fracture management.

Topic 25. Odontostomatology

PRACTICAL PROGRAM:

Surgical practical sessions (5 sessions)

1 Introduction to the surgical environment (2 h) - CIR1

- Preparation of surgical personnel (cap, mask, gown, gloves...).
- Preparation of the patient and the operation field: Recognition and handling of basic surgical instruments. How to assemble the instrument table. How to handle the instruments. Handling and maintenance of instruments.

2. Basic suture practice on biomodels (4 h) - CIR2

- Recognition of very basic surgical material and suture threads.
- Handling of basic surgical instruments.
- Making surgical knots (by hand and with instruments).
- Performance of different types of sutures in biomodel.

3. Basic surgical techniques I (4 h) performed on carcasses or slaughterhouse parts (depending on availability) - CIR3

- Preparation of the operating room, personnel, patient, etc.
- Performance of elementary surgical techniques, incision, dissection, excision and suturing.
- How the assistant should assist in the suturing process.
- Most important cutaneous plastias.

4. Basic surgical techniques II (4 h) performed on cadavers. - CIR4

- Haemostasis techniques.
- Peritoneal management.
- Colours and textures of dead vs. live tissue.
- Opening of a hollow viscera.
- Closure of a hollow viscera.
- Continuous suture in the closure of hollow viscera.
- Continuous suture in muscle closure.
- Continuous suture in the subcutaneous closure.
- Skin suture.

5. Basic osteosynthesis practices on biomodels (3 h) - CIR5

- Recognition of basic osteosynthesis material

- Placement of an intramedullary nail
- Placement of fasteners
- Handling a bilateral external fixator in one plane
- Placement of an osteosynthesis plate with neutralizing effect

Practical anesthesia sessions (5 sessions)

1 POA Preanesthesia. (2.5 h) - ANES1

Preoperative assessment (POA). How to make a good POA. Performance of 1 or 2 real clinical assessments in the medical room. Preanesthesia objectives. Guidelines. Dose calculation.

2. Induction and intubation. Anesthetic machine (2 h) - ANES2

Inducing drugs. Anesthetic planes. Intubation: material, technique, complications. Preparation of the anaesthetic machine. Circuits. Calculation of flows. Inhalation maintenance

3. Maintenance, monitoring and complications (2.5 h) - ANES3

Other maintenance. Analgesia plan. Basic and advanced monitoring. Main anaesthetic complications. CPR

4. Locoregional anesthesia (3 h) - ANES4

General principles of locoregional anesthesia. Main blocks based on anatomical references.

5. Clinical anesthesia (3 h) - ANES5

After passing the self-evaluation of the previous practices, the acquired knowledge will be applied to real clinical cases in the Veterinary Hospital.

4. Academic activities

Master classes: 40 hours

Theoretical sessions in which the contents of the course will be explained with a practical orientation

Surgical clinical practice: 27 hours

The students will perform practical surgery sessions in the teaching surgery laboratory and in the teaching operating room and practice anesthesia and resuscitation in the operating rooms and wards of the hospital.

Operating room practices: 3 hours

Students will attend a clinical anesthesia session with a real patient in the operating room.

Personal study: 97 hours

Assessment tests. 8 hours

5. Assessment system

1. Assessment of theoretical content: It will account for 70% of the final grade and it will be necessary to obtain a 6 out of 10 to pass the exam. It will be carried out by means of a written test, at the end of the first four-month period, consisting of a maximum of 60 questions. In addition, the tests will also be held in June and July. Assesses learning results 1, 2 and 6 to 11. The questions may be multiple-choice questions (5 answers and only one valid answer with no penalty for wrong answers), True or False questions, short answer questions or longer questions. The evaluation may be oral if agreed upon by student and teacher.

2. Assessment of practical content: It will account for 30% of the final grade.

2.1. Practical Surgery Assessment (15%) Evaluates learning results 3, 4 and 5.

- Practical Surgery Exam (13%) The skills acquired in the practical surgery sessions will be evaluated by means of a test consisting of several "stations" in which the student will have to perform some of the protocols or techniques corresponding to the different practical sessions. The student will have to take the exam at the end of the four-month period, having another option to pass it in June or July.
- Evaluation during the practical sessions on the contents of Surgery (2%) The time of the practical sessions is not always enough to acquire the necessary skills. Individualized non face-to-face assignments will be proposed in the practices, which the student will have to prepare at home for the following practice. The student's engagement and progression in these topics will be assessed. Students will be evaluated during practices CIR 1-5 on the basis of their performance. Students will be evaluated at the beginning of the practice CIR 5 in order to check if they have prepared the practice with the documentation available in Moodle for this purpose.

2.2. Evaluation of Anesthesia practices (15%) Evaluates learning results 7 to 11.

- Practical Anesthesia Exam (13%) The skills acquired in the practical anesthesia sessions will be evaluated by means of a test consisting of several "stations" in which the student will have to perform some of the protocols or techniques corresponding to each session. The student will have to take the exam at the end of the four-month period, having another option to pass it in June or July.
- Self-assessment in Moodle on the contents of the Anaesthesiology practices (2%) Students should prepare the contents of the anaesthesiology practices and review the theoretical knowledge before attending them. For this purpose, the objectives of the practices, as well as additional material and sample questions will be available in

Moodle. These will be evaluated together after the seminars and practical workshops, before the clinical session, by means of self-evaluation in Moodle.

The practical exams of Surgery and Anesthesia must be passed separately in order to be averaged. The grade for each of the evaluation activities will be valid only for the current academic year.