

## C-SAS.1 Small Animal Surgery Core

**Credits:** 10 (100 hours)

**Provider:** Veterinary Postgraduate Unit – Institute of Veterinary Science

### RCVS Content Covered

The following outlines the modular content as set out by the RCVS.

This module should be seen as a 'core' surgery module, which provides the foundation needed for further development in the other small animal surgery modules.

### MODULE CONTENT

The areas to be covered should include the following:

#### Pathophysiology of surgical disease:

- Physiology of normal and disordered bone and soft tissue healing (including tendons, muscle, nerve and other body systems)
- Pathophysiology of trauma

#### Diagnosis of surgical disease:

- Review history taking, clinical examination including neurological examinations
- Review diagnostic methods for identification of surgical disease
- Screening for occult or contributory medical disease
- Review the impact of concurrent medical disease on surgical outcomes.
- Principles of decision taking with regard to surgical disease, including when to refer

#### Theatre Practice:

- Instrumentation for surgery (soft tissue and orthopaedic)
  - Identification of instruments for specific use
  - Knowledge of materials used for surgical instrumentation
- Correct use and maintenance of surgical equipment
- Sterilisation of instruments using different techniques, and storage and identification of sterile packs.
- Preparation of surgeon and assistants
- Preparation of patient
  - Identification of level of contamination and risks of specific surgeries.
  - (clean, clean-contaminated, contaminated, infected)
  - Rational choice of antiseptic solutions.
  - Draping techniques and materials.
- Asepsis, management of intra-operative contamination, sterile technique
- Theatre design and management of theatre personnel
- Record keeping in theatre and the use of records to identify sources of breaks in

- asepsis or post operative infections
- Appropriate use of perioperative antibiotics and choice of antibiotics.

### **Surgical technique:**

- Halstead's principles of surgery
- Principles of oncologic surgery
- Tissue handling techniques and setting standards
- Management of surgical assistants

### **Introduction to current thinking in anaesthesia for non-routine surgeries:**

- Analgesia
- Sedation protocols for diagnostic procedures
- Premedication
- Induction
- Maintenance of anaesthesia
- Monitoring techniques and how that information is useful to the surgeon/anaesthetist
- Specific issues with long anaesthetic times
- Specific issues with patients in shock

### **Post operative care:**

- Thermal regulation
- Nutrition and fluid balance
- Oxygen supplementation
- Monitoring techniques
- Identifying and communicating nursing requirements
- Management of pain and stress
- Physiotherapy
- Monitoring and record keeping, interpretation of records
- Identification of post operative complications; management strategies and knowing when to refer

### **Wound management:**

- Surgical wounds
- Basic wound first aid
- Open wound management (lavage, debridement, principles of promoting healing)
- Primary layer wound dressings
- Secondary and other dressing layers (including casting materials)
- Disordered open wound healing
- Decision making in wound management

### **Surgical ethics:**

- Introduce concepts of appropriate and inappropriate surgery
- Decision making in surgery
- Communication with owners pre and post operatively; management of post operative care instructions
- When to offer referral

## Aim of the Module

The aim of this module is to develop in depth understanding of the principles of tissue healing and the physiological consequences of surgery on all body systems, and an ability to critically appraise current working practices with regard to preparation and management of the surgical patient, the surgical environment, staff and instruments. It is anticipated that the information gained in this module be used to modify working practices and upgrade to 'best practice' techniques in preparation for gaining the surgical or medical skills in other C modules.

## Learning Outcomes

At the end of the module, candidates should be able to:

1. demonstrate a systematic understanding of the anatomical, physiological, immunological and pathological processes involved in surgical disease, including the relationship between surgery and the overall health status of the patient, and the role of surgical trauma in this relationship;
2. demonstrate a critical awareness of the role of asepsis, the preparation of theatre, personnel and patient for surgery including anaesthesia and analgesia;
3. demonstrate in-depth knowledge of the importance of post surgical care, including analgesia, nutrition and postoperative rehabilitation applying current evidence based medicine in order to achieve "best practice" standards;
4. demonstrate a comprehensive familiarity with the clinical presentation of the common surgical conditions affecting dogs, cats and small mammals;
5. evaluate critically the pharmacology and use of the major drug groups, especially antimicrobials, their applicability to the various surgical techniques and review and critically reflect on current practices in light of the knowledge gained;
6. demonstrate the ability to utilise a sound clinical reasoning process, incorporating evidence from the diagnostic database and scientific literature as well the ability to appropriately adapt to client, animal and practice factors;
7. demonstrate the ability to recognise the appropriate case for onward referral.

## Module Structure

The module will be divided into 8 study units:

**Study Unit 1 Pathophysiology of Surgery:** including the physiology of normal and disordered bone and soft tissues (including tendons, muscle, nerve and other body systems) and the pathophysiology of trauma.

**Study Unit 2 Diagnosis of Surgical Disease:** including history, clinical examination and further diagnostic testing. The value of screening for occult disease and principles of surgical decision making, including when to refer, are also covered.

**Study Unit 3 Theatre Practice:** including the instrumentation for soft tissue and orthopaedic surgery, preparation of surgery personal, equipment, facilities and the patient and the application of disinfectants and draping. The importance of appropriate peri-operative antimicrobial use and asepsis is emphasised.

**Study Unit 4 Surgical Technique:** including Halstead's principles of surgery, tissue handling techniques and the special principles of oncologic surgery.

**Study Unit 5 Introduction to Current Thinking in Anaesthesia:** including analgesia, sedation, premedication, induction maintenance, monitoring of the patient in non-routine surgeries. A specific focus is placed on issues with long anaesthetic times and dealing with patients in shock.

**Study Unit 6 Post Operative Care:** in particular thermoregulation, nutrition and fluid balance, oxygen supplementation and the importance of monitoring.

**Study Unit 7 Wound Management:** including management of the surgery site, basic wound first aid and principles of wound management including dressings and casting materials as well as decision making in wound management, using current evidence based medicine.

**Study Unit 8 Surgical Ethics:** including the concepts of appropriate and inappropriate surgery, decision making (including when to refer) and the importance of effective communication with owners pre-, and post-operatively. This unit will be incorporated within all other study units.

## Assessment Strategy

Portfolio of cases (80 case logbook\*) presenting a broad spread of cases, 3 x reflective case reports (1500 words), 1 x short answer question and/or MCQ test and 1 x journal critique/journal club presentation (pass/fail)

\*This case log will include minimum case numbers of both 24 orthopaedic and 24 soft tissue surgery cases, as well as other requirements, so it is important that you have access to these cases before enrolling.

PLEASE NOTE: It is your responsibility to ensure that you have access to sufficient appropriate cases where you were the primary decision maker to produce adequate material for the module. This may not be possible with some internship positions. You must also be aware of any limitations of your facilities that may make the accumulation of appropriate cases difficult or impossible.