C-E.13 Equine Dental Care, Diagnosis and Treatment

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.

Common dental diseases

Candidates should be able to recognise the presenting clinical signs (and absence of signs) of the following common dental conditions, and give appropriate treatments:

- Incisors: overgrowth, smiles, slants, frowns, steps.
- Molars: waves, hooks, ramps, excessive transverse ridges, diastema, occlusal defects and fractures.
- The gingival, especially periodontal disease.

Management of large overgrowths requiring motorised equipment.

Candidates should be able to take forward basic floating skills from the foundation module and use these in combination with motorised equipment to deal with large dental overgrowths.

- Severe dental overgrowths resulting in malocclusions commonly termed “Hooks” and “Ramps”,
- “Wave mouth”.
- “Step Mouth”.
- “Excessive transverse ridges”.

Dental pathology

Candidates should be able to identify and classify various dental lesions. Specifically including:

- Periodontal disease – assessment of and estimation of attachment loss in individual teeth.
- Infundibular Decay – as an important cause of dental fracture.
- Pathogenesis, identification and classification of infundibular lesions.
- Pulp exposure, necrosis and pulpitis.
- Identification and assessment of disease of the pulp chamber.

Management of diastema and gingival / periodontal disease

- Understanding of pathophysiology of periodontal disease in horses and ponies including techniques facilitating its prevention and management.
- Candidates should be able to demonstrate a logical approach to the treatment of these diseases, and the formulation of a treatment plan which may involve:
    - Correction of malocclusions
    - Use of local debridement and perioceuticals
    - Use of diastema bur – indications, complications and technique.
    - Importance of removing affected teeth from occlusion
    - Dietary management
    - Use of systemic drugs
    - Exodontia

Management of the dental disease in the Geriatric Horse.

Candidates should be familiar with the special requirements for dentistry in the 'geriatric' horse.

- Features of geriatric dentistry predisposing to dental disease
- Consequences of dental disease in geriatric horses
- History of dental treatments in geriatric animals.
- Treatment of loose cheek
- Limitations of the ability to correct malocclusions and uneven tables in the older horse.
- Significance of loose incisors.
- Temporomandibular arthropathy
- Systemic disease impacting on geriatric dentition (e.g. Cushings syndrome)
- Complications in the treatment of dental disease

Management of the dental disease in the Miniature Horse

Candidates should become familiar with specific dental conditions associated with the miniature horse.

- The effects of overcrowding, misalignments, impactions recognising maxillary and mandibular eruption cysts.
- Possible need for special 'miniaturised' equipment.

Awareness of some practised techniques in "performance dentistry"

- Anecdotal versus evidence based practise.

The young developing horse

- Identification and principles of treatment in developing animals such as supernumerary teeth, brachygnathism
- The influence of eruption times of the molars on the formation of 'waves' and 'dental overgrowths'.

Radiography of the upper and lower jaw

Candidates should be able to demonstrate a full understanding of the performance and interpretation of veterinary diagnostic imaging as it relates to equine dentistry:

- Effective restraint and positioning
- Projections, film type (digital), radiographic safety.
- Description of and knowledge of equine dental radiology.
- Understanding of the application and limitation of radiographic techniques.
- Understanding of alternative techniques such as nuclear medicine, computed tomography and magnetic resonance imaging. An appreciation of the indications for referral for these techniques.

Aim of the Module

The aim of this module is to develop an in-depth knowledge of the underlying theory and practical approach to prevention and treatment of dental disorders in the horse.

Learning Outcomes

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

1. demonstrate in-depth understanding of the anatomy and physiology of the equine oral cavity and associated structures;
2. demonstrate a critical awareness of the pathological process in the equine oral cavity including dental overgrowths, dental pathology, diastema and gingival/periodontal disease;
3. demonstrate application of a sound clinical reasoning process in the approach to equine dental disease, incorporating evidence from the diagnostic database and scientific literature as well the ability to appropriately adapt to client, animal and practice factors;
4. critically appraise literature relevant to clinical cases in the topics covered and discuss how the literature can be used to inform practice;
5. demonstrate critical reflection on clinical work, including identifying potential clinical audit points translating to new protocols or measureable outcomes.

Module Structure

This module is divided into 4 Study Units as outlined below.

Study Unit 1: Dental overgrowths and their prevention

- Review dental anatomy and physiology
- Incisors: overgrowth, smiles, slants, frowns, steps
- Severe dental overgrowths resulting in malocclusions commonly termed “Hooks” and “Ramps”,
- “Wave mouth”
- “Step Mouth”
- “Excessive transverse ridges”
- Use of appropriate equipment including motorised equipment where necessary

Study Unit 2. Diagnostic imaging

- Effective restraint and positioning
- Projections, film type (digital), radiographic safety
- Interpretation of equine dental radiology
- Understanding of alternative techniques such as nuclear medicine, computed tomography and magnetic resonance imaging and an appreciation of the indications for referral for these techniques.

Study Unit 3 Dental pathology, diastema and gingival / periodontal disease

- Infundibular Decay – as an important cause of dental fracture
- Pathogenesis, identification and classification of infundibular lesions
- Pulp exposure, necrosis and pulpitis
- Identification and assessment of disease of the pulp chamber
- Pathophysiology of periodontal disease in horses and ponies including techniques facilitating its prevention and management
- Pathophysiology and correction of diastema
- Correction of malocclusions
- Exodontia

Study Unit 4: Dental disease in special situations

- The Geriatric Horse
- The Miniature Horse
- “performance dentistry”
- The young developing horse

This module will also incorporate the generic skills of evidence based medicine, clinical reasoning, literature review and critique, communication, clinical audit and reflection.

Assessment Strategy

3 x reflective case reports (1500 words each), 1 x open book examinations using a range of short answer questions and 1 x journal critique/journal club presentation (pass/fail)

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.