centralcpd

Part of Improve International

Deep Dives

Critical Care

Critical Care

Learning Objectives:

1. Triage of the Emergency Patient

a. Ability to rapidly assess a critical patient and perform a primary survey including the use of point of care ultrasound
b. Knowledge of how to accurately assess the three main body systems
c. Ability to perform a complete secondary survey
d. Understanding of the importance of analgesia and suitable drug choices for trauma patients

2. Emergency Diagnostics and Point of Care Ultrasound

a. Understanding of the use of point of care ultrasound for:
    i. Recognition of abdominal free fluid
    ii. Recognition of common pathologies
    iii. Recognition of B lines, glide sign and pleural fluid
    iv. Left atrial assessment in cases of suspect congestive heart failure
b. Ability to use laboratory blood testing for assessment of critical patients
c. Ability to use point of care ultrasound, abdominocentesis and haematology to recognise haemorrhage
d. Understanding of the interpretation of arterial blood gas results
e. Understanding of life-threatening electrolyte disturbances and consequences
f. Ability to prioritise the recognition of sepsis and localise source

3. Respiratory Stabilisation

a. Ability to recognise clinical signs of respiratory distress and localise likely area of pathology
b. Ability to assess severity of dyspnoea and knowledge of stabilisation
c. Knowledge of the five causes of hypoxaemia
d. Ability to select appropriate imaging for further investigation of the dyspnoeic patient
e. Knowledge of differential diagnoses for pathology affecting the different sections of the respiratory tract
f. Ability to synchronise the diagnostic results with the clinical responses to formulate a diagnosis

4. Shock and Cardiovascular Stabilisation

a. Understanding of the pathophysiology of shock and the different types of shock
b. Knowledge of the components of cardiac output and of arterial oxygen concentrations
c. Ability to use triage examination, history and point of care blood work to determine type of shock
d. Ability to prescribe appropriate fluid resuscitation for the treatment of hypovolaemic shock, including appropriate fluid choices, bolus rates and monitoring
e. Ability to identify cardiogenic shock and knowledge of appropriate treatments for arrythmias
f. Understanding of pericardial effusion as a cause of obstructive shock and appropriate treatment
g. Knowledge of clinical signs and causes of distributive shock and treatment options
h. Understanding of indications for different fluid choices and rates (crystalloid vs colloid)
i. Knowledge of vascular access techniques and intraosseous access
j. Knowledge of appropriate fluid resuscitation when active bleeding

5. Cardiopulmonary Arrest and Resuscitation

a. Understanding of how to perform effective CPR and implement RECOVER guidelines for basic and advanced life support
b. Ability to recognise common arrest rhythms
c. Knowledge of recommended rates for compressions and breaths
d. Understanding of shockable vs non-shockable arrest rhythms
e. Understanding of indications for specific drugs during CPR
f. Knowledge of post cardiac arrest care
g. Understanding of the importance of communication during cardiopulmonary resuscitation and how to debrief

6. Neurological Stabilisation

a. Ability to perform a comprehensive neurological assessment, including cranial nerve examination
b. Understanding of the effect of CNS trauma on respiration and ability to identify associated respiratory patterns
c. Ability to recognise evidence of increased intracranial pressure and knowledge of the use of hyperosmolar agents
d. Understanding of the differential diagnoses for altered mentation
e. Knowledge of common neurological emergencies including diagnosis and stabilisation of toxic encephalopathy, traumatic brain injuries, status epilepticus and cluster seizures

7. Endocrine Emergencies

a. Knowledge of the emergency management of hypoadrenocorticism
b. Understanding of the pathophysiology of diabetic ketoacidosis and principles of treatment and stabilisation

8. Toxicology

a. Knowledge of the common toxins which affect dogs and cats, including the body systems they affect and common clinical presentations
b. Knowledge of decontamination techniques and appropriate stabilisation

9. Coagulation and Clotting Disorders

a. Understanding of the clotting cascade, including primary and secondary coagulation
b. Understanding of the fibrinolytic pathway
c. Knowledge of platelet disorders, hyperfibrinolysis and clotting factor disorders, including diagnosis and treatment options
d. Understanding of coagulation testing and ability to choose appropriate testing based on clinical presentation
e. Knowledge of the pathophysiology of disseminated intravascular coagulation, triggers, diagnosis and treatment options
f. Ability to choose appropriate blood products based on coagulation abnormalities
g. Understanding of Virchow's triad
h. Knowledge of the pathophysiology of thrombosis, risk factors, diagnosis and the use of antithrombotics
i. Knowledge of specific conditions likely to cause coagulation issues

10. Transfusion Medicine

a. Knowledge of the feline and canine blood groups and the importance of blood typing
b. Understanding of blood typing methodology and interpretation, including when to cross match
c. Understanding of the indications and risks of transfusions
d. Knowledge of the different types of transfusion reactions and associated clinical signs
e. Understanding of the principles of xenotransfusion and autologous transfusion

11. Renal and Urinary Tract Emergencies

a. Knowledge of the emergency management of acute kidney injury, including recognition of clinical presentation, staging and monitoring
b. Understanding of the management of feline urethral obstruction

12. Traumatic Musculoskeletal Injuries and Wounds

a. Knowledge of triage and the initial approach to traumatic musculoskeletal injuries
b. Knowledge of the initial management of traumatic wounds, including lavage and debridement techniques
c. Ability to use knowledge of wound healing to make decisions on timing of interventions and wound closure

13. Critical Care Nutrition

a. Understanding of the importance of nutrition for critically ill animals and the consequences of malnutrition
b. Ability to formulate appropriate feeding plans
c. Knowledge of the use of feeding tubes, including placement