

Corrin Boyd

Case based POCUS | *Corrin Boyd*

This is a case-based session. It will cover how I incorporate POCUS assessment into my daily assessment, diagnostic workup, and decision making process of complex ICU patients. Focus will be on how POCUS can complement other diagnostic tests in piecing together the cardiovascular and respiratory status of a critically-ill patient. This will emphasise how POCUS can aid my clinical shock decision-making schema.

Anaphylaxis: pathophysiology, diagnosis, and treatment | *Claire Sharp & Corrin Boyd*

Anaphylaxis refers to a life-threatening acute type 1 hypersensitivity reaction that results in multiple organ dysfunction. The pathophysiology of anaphylaxis is complex and shows substantial variation in between species. Diagnosis is sometimes straightforward based on classic dermatological signs but can be challenging when they are absent. Treatment often requires intensive acute support for organ dysfunction. However, prognosis is very good with timely and appropriate recognition and management. This session will discuss the current understanding of the pathophysiology, diagnosis, and treatment of anaphylaxis in small animals.

Envenomations | *Claire Sharp & Corrin Boyd*

Envenomation has the potential to cause a rapid and severe constellation of systemic consequences. This session, focusing on snake envenomation, highlights these consequences from both the perspective of diagnostic and therapeutic considerations. Several case examples will be presented to demonstrate typical clinical presentations and their management. Recent developments in the management of envenomation, including modern antivenoms and small molecule inhibitors of venom components, will be highlighted.

Smoke inhalation | *Corrin Boyd*

Smoke inhalation causes pulmonary injury and hypoxaemia through multiple mechanisms. A case example will be used to work through the physiology of these mechanisms in sequence, and illuminate them in the context of the typical time course of a patient's journey. Appropriate diagnostic and therapeutic steps for each mechanism will be incorporated into the discussion of the physiology.

Hospital-acquired AKI | *Corrin Boyd*

Unlike community-acquired AKI, hospital-acquired AKI is often subtle and multifactorial. This session discusses how risk factors including hypoperfusion, systemic inflammation, iatrogenic nephrotoxins and fluid therapy can cause AKI.

In addition to pathophysiology, there is focus on practical steps that can be taken to limit these risk factors. Additionally, the subtle nature of hospital-acquired AKI leads to diagnostic difficulties, with discussion centering on scoring systems and biomarkers. Finally, a rational treatment approach is discussed, with a focus on limiting further injury, fluid management and supportive care.

Urinary AKI biomarkers | *Corrin Boyd*

There is increasing recognition of the importance of acute kidney injury (AKI) in small animal emergency and critical care, accompanied by an increased need for accurate early diagnostics for both clinical and research purposes. There has been significant recent research into urinary biomarkers of AKI. This current body of research is reviewed. Emphasis is placed on the physiology underpinning the release of these biomarkers, a knowledge of which is essential for correct interpretation of biomarker elevation. In-depth discussion will centre on the biomarkers with the largest body of evidence and greatest availability.

IV fluids for nephrotoxins: what is the evidence? | *Corrin Boyd*

NSAIDs, grapes, lillies! They need to be admitted and be given twice maintenance fluids! Most of us learned this. But what is the evidence? Certainly, more urine comes out of the patient (most times) when you do this. But is it really helping the kidneys? And could it even hurt them? This session will examine the evidence and physiology underlying fluid therapy for nephrotoxins. This understanding will allow for a more nuanced approach.

Baroreceptor Physiology | *Corrin Boyd*

The cardiovascular system is kept under tight homeostatic control to maintain tissue perfusion and oxygen delivery. Baroreceptors and the baroreceptor reflex are core to this homeostasis. Understanding of baroreceptor function is vital to understanding the pathophysiology and compensatory responses to important clinical shock syndromes such as hypovolaemia, cardiac failure, and vasodilatory shock. This session will describe the major baroreceptors, the classic baroreceptor reflex, and other reflex pathways mediated by high and low-pressure baroreceptors.