

1. Ambulatory Emergency Medicine

While practicing exotic animal medicine as an ambulatory practitioner, veterinarians need to be prepared for the inevitable emergency call. Emergencies in exotic animal medicine come in all shapes and sizes and the veterinarian must be prepared for a variety of situations. With the proper training, equipment, and managing client expectations, an ambulatory exotics animal practitioner can successfully address emergencies. This article provides a brief overview in managing emergency cases in an ambulatory exotics animal practice.

2. Emergency Response in the Ambulatory Surgery Center

As more surgeries are moving out of the hospital setting, effective emergency response in freestanding ambulatory surgery centers requires organized preparedness. Rapid, consistent emergency response can be challenged by their rarity of occurrence, fast-paced environment, and relative lack of resources. Anesthesiologists who practice in these settings must be aware of the differences between the management of an anesthetic emergency in the hospital with virtually unlimited resources and staff, versus an ambulatory surgery center with limited resources and slightly different goal: stabilization and transfer of care.

3. Pediatric Oncologic Emergencies

Pediatric patients with cancer, although rarely, do present to emergency departments for first-time diagnosis, as well as for complications of treatment. The presenting symptoms can be vague, so emergency physicians must maintain a high index of suspicion and be aware of guidelines to help direct appropriate care after an initial diagnosis. It is also necessary to know the complications of treatment. Although these patients often seek care in the institution where they receive treatment, many live far from these locations and may present to any emergency department in extremis.

4. A Review in the Treatment of Oncologic Emergencies

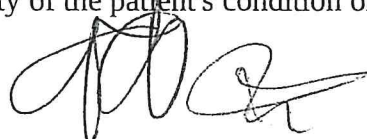
Oncologic emergencies are often categorized as a group of metabolic abnormalities associated with the diagnosis of cancer or the initiation of chemotherapy for treatment. These syndromes often arise in the acute setting, demanding an accurate knowledge of the associated condition and current treatment. In this review, we evaluate five oncologic emergencies: tumor lysis syndrome, hypercalcemia, hyponatremia, spinal cord compression, and disseminated intravascular coagulation.

5. Plain Language Emergency Alert Codes: The Importance of Direct Impact Statements in Hospital Emergency Alerts

The nature of an emergency is not predictable, and no two emergencies are alike. In response to this unpredictable nature, healthcare facilities across the nation have adopted a system of emergency codes to notify staff of an emergent situation, often without alerting patients and visitors to the crises. However, the system of emergency codes varies significantly within most states and even within healthcare coalition regions.

6. Hyperbaric Oxygen Therapy Emergencies

Emergent indications for HBO₂ are not only for some of the most serious conditions, but also may be the only modality to directly target the patient's pathophysiology. They are to begin emergently or urgently, but may be limited by either the instability of the patient's condition or transfer



logistics. Often these emergent treatments involve several treatments in the first 24 hours for best outcomes.

7. One Health and Emergency Preparedness

Emergencies such as hurricanes, floods and nuclear disasters do not just affect people and the environment; they also affect domestic animals. In this latest article in Veterinary Record's One Health series, Kendra Stauffer and Lisa Conti discuss how One Health considerations are being incorporated into emergency preparedness planning in the USA.

8. Diagnosis and Management of Spinal Cord Emergencies

Most spinal cord injury is seen with trauma. Nontraumatic spinal cord emergencies are discussed in this chapter. These myelopathies are rare but potentially devastating neurologic disorders. In some situations prior comorbidity (e.g., advanced cancer) provides a clue, but in others (e.g., autoimmune myelopathies) it may come with little warning. Neurologic examination helps distinguish spinal cord emergencies from peripheral nervous system emergencies (e.g., Guillain-Barré), although some features overlap.

9. National Characteristics of Emergency Medical Services Responses in the United States

We conducted an analysis of the 2010 National Emergency Medical Services Information System (NEMSIS) research data set, encompassing EMS emergency response data from 29 states. From these data, we estimated the national number and incidence of EMS responses. We also characterized EMS responses and the patients receiving care.

10. Noninvasive Temporary Cardiac Pacing in the Emergency Department: A Review and Update

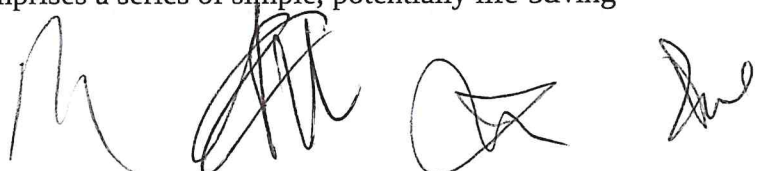
NTP's superior safety and ease of use compared with other emergent pacing alternatives make it the emergency pacemaker choice for the acute stabilization of patients requiring pacing. The key to its success is timely use. The more quickly it is initiated, the more effective it will be. NTP represents a quick, effective treatment for asystole and symptomatic bradycardia. As emergency nurses, physicians, and paramedics become more experienced with its use, there is increased potential for enhanced survival rates for these patients.

11. Pediatric Urological Emergencies

Although few children are severely ill when evaluated in the pediatric office, developing the skills to recognize an infant or child who requires hospitalization is critical. Some children will require treatment in an emergency department or direct admission to an inpatient facility, whereas other children can be managed as outpatients. Determining when an infant requires an inpatient admission is particularly important because the metabolic reserve is less abundant in the newborn. Patients with hemodynamic instability must be emergently addressed. This article outlines the most common urgent and emergent pediatric urological conditions with the goal to direct initial evaluation and treatment.

12. How to Perform First Aid

RATIONALE AND KEY POINTS: This article aims to help nurses to perform first aid in a safe, effective and patient-centred manner. First aid comprises a series of simple, potentially life-saving



steps that an individual can perform with minimal equipment. Although it is not a legal requirement to respond to an emergency situation outside of work, nurses have a professional duty to respond and provide care within the limits of their competency.

13. The Treatment of Snake Bites in a First Aid Setting: A Systematic Review

The worldwide burden of snakebite is high, especially in remote regions with lesser accessibility to professional healthcare. Therefore, adequate first aid for snakebite is of the utmost importance. A wide range of different first aid techniques have been described in literature, and are being used in practice. This systematic review aimed to summarize the best available evidence concerning effective and feasible first aid techniques for snakebite.

14. Emergency Medicine in Japan

There have been few reports published in English on emergency medicine (EM) in Japan; the main reason for this is that the concept of EM was different in Japan from that in western countries. In the 1960s, legislation was passed in Japan that implemented emergency medical services, and emergency hospitals were designated by the government. There were no emergency medicine specialists, and so surgeons/physicians without specialist training in emergency medicine provided care to emergency patients (the multispecialist-type model)

15. Epidemiology and Clinical Characteristics of COVID-19

Since December 2019, there has been an outbreak of a novel coronavirus (COVID-19) infection in Wuhan, China. Meanwhile, the outbreak also drew attention and concern from the World Health Organization (WHO). COVID-19 is another human infectious disease caused by coronavirus. The transmission of COVID-19 is potent and the infection rate is fast. Since there is no specific drug for COVID-19, the treatment is mainly symptomatic supportive therapy.

16. Psychopharmacology of COVID-19

With the rapid, global spread of SARS-CoV-2, hospitals have become inundated with patients suffering from COVID-19. Consultation-liaison psychiatrists are actively involved in managing these patients and should familiarize themselves with how the virus and its proposed treatments can affect psychotropic management. The only FDA approved drug to treat COVID-19 is remdesivir, and other off-label medications used include chloroquine and hydroxychloroquine, tocilizumab, lopinavir/ritonavir, favipiravir, convalescent plasma therapy, azithromycin, vitamin C, corticosteroids, interferon and colchicine.

17. COVID-19: Melatonin as a Potential Adjuvant Treatment

This article summarizes the likely benefits of melatonin in the attenuation of COVID-19 based on its putative pathogenesis. The recent outbreak of COVID-19 has become a pandemic with tens of thousands of infected patients. Based on clinical features, pathology, the pathogenesis of acute respiratory disorder induced by either highly homogenous coronaviruses or other pathogens, the evidence suggests that excessive inflammation, oxidation, and an exaggerated immune response very likely contribute to COVID-19 pathology.

18. The Epidemiology, Diagnosis and Treatment of COVID-19

In December 2019, the outbreak of the novel coronavirus disease (COVID-19) in China spread worldwide, becoming an emergency of major international concern. SARS-CoV-2 infection causes clusters of severe respiratory illness similar to severe acute respiratory syndrome coronavirus. Human-to-human transmission via droplets, contaminated hands or surfaces has been described,

with incubation times of 2-14 days. Early diagnosis, quarantine, and supportive treatments are essential to cure patients.

19. COVID-19: Therapeutics and interventions currently under consideration

With the emergence of COVID-19 extensive research began to identify medications, candidate compounds and other therapeutic approaches. The complex virology of COVID-19 may provide multiple potential target points for antiviral therapy, and vaccines; extensive global research is underway to exploit these potential opportunities. The complex pathophysiology, pulmonary and extrapulmonary disease, and immune mediated effects such as cytokine storm, make medical management more challenging than many viral illnesses.

20. ABO phenotype and death in critically ill patients with COVID-19

Blood groups are inherited traits that vary across populations, likely due to both founder effects and natural selection. A link between blood groups and susceptibility to infectious disease has been well-described, with notable examples being *H. Pylori* and *Plasmodium falciparum* infection. Blood group antigens may influence disease susceptibility by several mechanisms, including serving as receptors or decoys for infectious organisms and modifying immune response in the form of anti-ABO antibodies.

21. SARS-CoV-2 Infection Susceptibility of Pregnant Patients at Term Regarding ABO and Rh Blood Groups: A Cohort Study

Background and Objectives: The susceptibility of pregnant patients at term to SARS-CoV-2 infection regarding the ABO and Rh blood group polymorphism was analyzed in this study.

Materials and Methods: In this prospective study, 457 patients admitted for delivery at term in our hospital, between 1 April 2020 and 31 December 2020 were studied. There were 46 positive and 411 SARS-CoV-2 negative patients. Their values for RT-PCR, ABO, and Rh blood group analyses, which were determined upon admittance, were studied.

22. Association between the dynamics of the COVID-19 epidemic and ABO blood type distribution

The coronavirus disease 2019 (COVID-19) pandemic is currently the most critical challenge in public health. An understanding of the factors that affect severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) infection will help fight the COVID-19 pandemic. This study sought to investigate the association between SARS-CoV-2 infection and blood type distribution. The big data provided by the World Health Organization (WHO) and Johns Hopkins University were used to assess the dynamics of the COVID-19 epidemic.

23. Comprehensive overview of COVID-19 based on current evidence

In December 2019, twenty-seven pneumonia patients with unknown causes originated in South China seafood market in Wuhan. The virus infection spread rapidly and swept through China in less than a month. Subsequently, the virus was proven a novel coronavirus and named SARS-CoV-2. The outbreak of novel coronavirus has been determined as a Public Health Emergency of International Concern (PHEIC) by WHO on January 31, 2020

24. Cholesterol, lipoproteins, and COVID-19: Basic concepts and clinical applications

Cholesterol is being recognized as a molecule involved in regulating the entry of the SARS-CoV-2 virus into the host cell. However, the data about the possible role of cholesterol carrying lipoproteins and their receptors in relation to infection are scarce and the connection of lipid-associated pathologies with COVID-19 disease is in its infancy. Herein we provide an overview of

lipids and lipid metabolism in relation to COVID-19, with special attention on different forms of cholesterol.

25. COVID-19: Coronavirus Vaccine Development Updates

Coronavirus Disease 2019 (COVID-19) is caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), a newly emerged coronavirus, and has been pandemic since March 2020 and led to many fatalities. Vaccines represent the most efficient means to control and stop the pandemic of COVID-19. However, currently there is no effective COVID-19 vaccine approved to use worldwide except for two human adenovirus vector vaccines, three inactivated vaccines, and one peptide vaccine for early or limited use in China and Russia.

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27. Wildlife Emergency and Critical Care

Wildlife patients often present as emergencies. For veterinarians who do not typically treat wildlife, it is important to be able to stabilize and determine the underlying cause of the animal's signs. This article discusses initial assessment, stabilization, and treatment of common emergency presentations in wild birds, reptiles, and mammals.

28. Responding to Covid-19: How to Navigate a Public Health Emergency Legally and Ethically

Few novel or emerging infectious diseases have posed such vital ethical challenges so quickly and dramatically as the novel coronavirus SARS-CoV-2. The World Health Organization declared a public health emergency of international concern and recently classified Covid-19 as a worldwide pandemic. As of this writing, the epidemic has not yet peaked in the United States, but community transmission is widespread. President Trump declared a national emergency as fifty governors declared state emergencies. In the coming weeks, hospitals will become overrun, stretched to their capacities.

29. COVID-19: Real-time dissemination of scientific information to fight a public health emergency of international concern

Rapidly sharing scientific information is an effective way to reduce public panic about COVID-19, and doing so is the key to providing real-time guidance to epidemiologists working to contain the outbreak, clinicians managing patients, and modelers helping to understand future developments and the possible effectiveness of various interventions. This issue has rapidly reviewed and published articles describing COVID-19, including the drug treatment options for SARS-CoV-2, its clinical characteristics, and therapies involving a combination of Chinese and Western medicine

30. COVID-19: Therapeutics and interventions currently under consideration

With the emergence of COVID-19 extensive research began to identify medications, candidate compounds and other therapeutic approaches. The complex virology of COVID-19 may provide

multiple potential target points for antiviral therapy, and vaccines; extensive global research is underway to exploit these potential opportunities. The complex pathophysiology, pulmonary and extrapulmonary disease, and immune mediated effects such as cytokine storm, make medical management more challenging than many viral illnesses.

31. Recurrence of positive SARS-CoV-2 in patients recovered from COVID-19

Recurrence of positive SARS CoV-2 PCR has been described in patients discharged from hospital after 2 consecutive negative PCR. We discuss possible explanations including false negative, reactivation and re-infection and propose different strategy to solve this issue. Prolonged SARS-CoV-2 RNA shedding and recurrence of viral RNA shedding in asymptomatic patients remain unknown. Transmission of SARS-CoV-2 by asymptomatic carriers had been documented.

32. COVID-19 and medical emergencies in the dental practice

As the government's coronavirus (COVID-19) lockdown starts to be eased and the NHS starts entering phase two of its response to the COVID-19 pandemic, dental practices are expecting a sharp increase in the need for dental treatment. Dental care professionals will have legitimate concerns regarding the risk of transmission of COVID-19, particularly if required to respond to a medical emergency, such as a cardiac arrest. This article provides an overview on being prepared for, and responding to, such an emergency, with particular reference to recently published Resuscitation Council (UK) guidance.

33. COVID-19: Virology, biology and novel laboratory diagnosis

SARS-CoV-2 infected patients usually present with severe viral pneumonia. Similar to SARS-CoV, the virus enters respiratory tract cells via the angiotensin-converting enzyme receptor 2. The structural proteins play an essential role in budding the virus particles released from different host cells. To date, an approved vaccine or treatment option of a preventive character to avoid severe courses of COVID-19 is still not available.

34. COVID-19: A Multidisciplinary Review

Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is a novel coronavirus that is responsible for the 2019-2020 pandemic. In this comprehensive review, we discuss the current published literature surrounding the SARS-CoV-2 virus. We examine the fundamental concepts including the origin, virology, pathogenesis, clinical manifestations, diagnosis, laboratory, radiology, and histopathologic findings, complications, and treatment.

35. Treatment for COVID-19: An overview

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by coronavirus-2 (SARS-CoV-2) that causes a severe acute respiratory syndrome, a characteristic hyperinflammatory response, vascular damage, microangiopathy, angiogenesis and widespread thrombosis. Four stages of COVID-19 have been identified: the first stage is characterised by upper respiratory tract infection; the second by the onset of dyspnoea and pneumonia; the third by a worsening clinical scenario dominated by a cytokine storm and the consequent hyperinflammatory state;

