Companion Animal Parasite Council (CAPC) Practice Exam (Sample)

Study Guide

BY EXAMZIFY

Everything you need from our exam experts!

Questions

1. What treatment is recommended for managing blastomycosis in dogs?

A. Antibiotics

B. Topical creams

C. Antifungal medications like itraconazole

D. Steroids

2. Which biting fly is known to be a biological vector of African horse sickness?

A. Stomoxys calcitrans

B. Culicoides

C. Simulium

D. Hippobosca

3. Which of the following helminths is rare in cats in the continental United States?

A. Trichuris felis

B. Ancylostoma tubaeformae

C. Dipylidium caninum

D. Strongyloides stercoralis

4. What symptom may suggest a tick-borne illness in dogs?

A. Nausea

B. Fever, lethargy, or joint swelling

C. Excessive thirst

D. Bright red gums

5. The emergence of encysted larvae from the intestinal mucosa in horses is associated with which condition?

A. Colitis

B. Cyathostomiasis

C. Heaves

D. Equine infectious anemia

6. What condition would infection with Bunostomum cause in sheep and goats?

A. Diarrhea

B. Weight gain

C. Anemia

D. Skin lesions

7. What essential aspect should owners maintain to reduce the risk of heartworm disease?

A. Regular veterinary check-ups

B. Providing high-fat diets

C. Extended outdoor activities

D. Feeding organic foods

8. What physical condition did the stray dog from Greece exhibit, noted for patches of alopecia?

A. Ringworm infection

B. Leishmaniasis

C. Pyoderma

D. Demodicosis

9. What clinical association prompted changes in the formulation of equine dewormers?

A. Data on parasite resistance

B. New data demonstrating link between tapeworms and colic

C. Increased efficacy of older drugs

D. Decreased side effects in older horses

10. What is the initial treatment step for puppies presenting with acute anemia suspected from hookworm infection?

A. Administer intravenous fluids

B. Prophylactically deworm with pyrantel pamoate

C. Perform a blood transfusion

D. Administer iron supplements

Answers

1. C
2. B
3. A
4. B
5. B
6. C
7. A
8. B
9. B
10. B

Explanations

1. What treatment is recommended for managing blastomycosis in dogs?

A. Antibiotics

B. Topical creams

C. Antifungal medications like itraconazole

D. Steroids

The recommended treatment for managing blastomycosis in dogs involves the use of antifungal medications such as itraconazole. Blastomycosis is a serious fungal infection caused by the Blastomyces dermatitidis organism, which primarily affects the lungs but can also disseminate to other organs in the body. Itraconazole is an azole antifungal that specifically targets the fungal cell membrane, inhibiting its synthesis and leading to cell death. This medication has been shown to be effective in treating systemic fungal infections, including blastomycosis. It is typically administered for an extended period, often several months, to ensure that the infection is fully resolved. The use of antibiotics is not appropriate in this case because they target bacterial infections and are ineffective against fungal pathogens. Topical creams also do not address the systemic nature of blastomycosis, as the condition often requires deeper penetration into tissues that topical treatments cannot provide. Steroids, while they can reduce inflammation, may actually worsen the infection by suppressing the immune response, which is crucial for fighting off fungal diseases. Thus, antifungal medications like itraconazole are the cornerstone of effective treatment for blastomycosis in dogs.

2. Which biting fly is known to be a biological vector of African horse sickness?

A. Stomoxys calcitrans

B. Culicoides

C. Simulium

D. Hippobosca

Culicoides, also known as biting midges or "no-see-ums," are recognized as the biological vector of African horse sickness. This disease is caused by a virus that primarily affects equines, and Culicoides play a critical role in its transmission. These small insects are particularly adept at biting and feeding on the blood of animals, including horses, and during this feeding process, they can introduce the virus into the host's bloodstream. The lifecycle of Culicoides allows them to carry and transmit the African horse sickness virus effectively, making them a significant concern in regions where the disease is prevalent. In contrast, Stomoxys calcitrans, also known as the stable fly, is primarily a nuisance fly and is not associated with the transmission of this particular virus. Simulium, commonly referred to as black flies, are known for their biting behavior but are not vectors for African horse sickness either. Hippobosca includes species such as the horse fly, which also does not serve as a biological vector for this disease. Thus, Culicoides is uniquely positioned as the key insect in the transmission of African horse sickness, clarifying why it is the correct answer.

3. Which of the following helminths is rare in cats in the continental United States?

A. Trichuris felis

B. Ancylostoma tubaeformae

C. Dipylidium caninum

D. Strongyloides stercoralis

Trichuris felis, commonly known as the cat whipworm, is indeed rare in cats in the continental United States. While whipworms can be a significant concern in certain animal populations, Trichuris felis has a low prevalence in the feline population, especially compared to other species such as dogs. In contrast, Ancylostoma tubaeformae is a type of hookworm that does present in cats and can cause issues such as anemia. Dipylidium caninum, the cucumber tapeworm, is also quite common in felines, typically transmitted through fleas. Strongyloides stercoralis is another helminth that, although primarily affecting dogs, can also be found in cats, albeit less frequently. The rarity of Trichuris felis in U.S. cats signifies that while it is a potential parasite for cats, it does not pose the same level of risk or prevalence as the other helminths mentioned. This understanding is relevant for veterinarians and pet owners in assessing and managing the health of cats regarding parasitic infections.

4. What symptom may suggest a tick-borne illness in dogs?

A. Nausea

B. Fever, lethargy, or joint swelling

C. Excessive thirst

D. Bright red gums

The symptoms of fever, lethargy, or joint swelling are classic indicators of a tick-borne illness in dogs. Tick-borne diseases, such as Lyme disease, Rocky Mountain spotted fever, and ehrlichiosis, often present with these specific signs due to the body's immune response to the infection. Fever typically occurs as the body fights off the pathogen, leading to an increase in body temperature. Lethargy indicates that the dog may be feeling unwell and is less active than usual. Joint swelling can occur due to inflammation as the disease affects the joints, which is particularly common in Lyme disease. While nausea, excessive thirst, and bright red gums may suggest other health issues in dogs, they are not the hallmark symptoms associated with tick-borne illnesses. Therefore, the combination of fever, lethargy, and joint swelling is the most relevant in detecting potential tick-related infections.

5. The emergence of encysted larvae from the intestinal mucosa in horses is associated with which condition?

A. Colitis

B. Cyathostomiasis

C. Heaves

D. Equine infectious anemia

The emergence of encysted larvae from the intestinal mucosa in horses is specifically associated with cyathostomiasis, which is a parasitic disease caused by small strongyles (cyathostomes). These larvae can encyst in the intestinal wall for extended periods, making them particularly problematic in the management of equine health. When conditions are favorable, such as when the horse experiences stress or changes in environmental conditions, these encysted larvae can emerge simultaneously into the intestinal lumen. This can lead to severe gastrointestinal issues, including inflammation and colitis, as the horses suffer from a rapid increase in worm burden. The symptoms may include weight loss, diarrhea, and colic, making it critical for horse owners and veterinarians to recognize and treat this condition effectively. The other options listed do not relate to the encysted larvae phenomenon. Colitis refers to inflammation of the colon and is not directly linked to the emergence of encysted larvae. Heaves is a respiratory condition and doesn't involve intestinal parasites. Equine infectious anemia is a viral disease that affects the horse's immune system rather than being associated with parasitic larvae. Thus, cyathostomiasis is the correct link to encysted larvae emerging from the intestinal mucosa.

6. What condition would infection with Bunostomum cause in sheep and goats?

A. Diarrhea

B. Weight gain

C. Anemia

D. Skin lesions

Infection with Bunostomum, a genus of hookworms, primarily leads to anemia in sheep and goats. This parasitic infection occurs as larvae penetrate the skin and migrate through the bloodstream to the intestines, where they attach to the intestinal lining and feed on the host's blood. This blood-feeding behavior results in significant blood loss, which can lead to anemia characterized by reduced red blood cell count. Anemia can manifest with clinical signs such as pale mucous membranes, lethargy, weakness, and in severe cases, respiratory distress. While other symptoms such as diarrhea might occur due to general gastrointestinal disturbance and weight gain is not typically associated with hookworm infection, the most significant and direct consequence of Bunostomum infection is indeed the development of anemia due to blood loss. Understanding the pathophysiology of the infection helps in recognizing anemia as the most critical health issue that arises from this parasitic zoonosis in small ruminants like sheep and goats.

7. What essential aspect should owners maintain to reduce the risk of heartworm disease?

A. Regular veterinary check-ups

B. Providing high-fat diets

C. Extended outdoor activities

D. Feeding organic foods

Maintaining regular veterinary check-ups is essential for reducing the risk of heartworm disease. During these visits, veterinarians can conduct important tests to check for heartworm presence and assess the overall health of the pet. They can also administer preventative medications, which are crucial since these medications effectively prevent the infection from occurring in the first place. Regular check-ups help ensure that any potential health issues, including heartworm disease, are caught early, allowing for timely intervention and treatment. Other options, while they may have their respective benefits for an animal's health, do not specifically address the risk of heartworm disease. High-fat diets, extended outdoor activities, and feeding organic foods do not provide the targeted protection that regular veterinary care and heartworm preventative measures do. Heartworm disease is primarily transmitted through mosquito bites, and without veterinary involvement, pets may go unprotected. Therefore, ensuring routine veterinary visits is key in fostering long-term health and mitigating the risks associated with this potentially serious condition.

8. What physical condition did the stray dog from Greece exhibit, noted for patches of alopecia?

A. Ringworm infection

B. Leishmaniasis

C. Pyoderma

D. Demodicosis

The presence of patches of alopecia, or hair loss, in the stray dog from Greece is most indicative of a condition like leishmaniasis. Leishmaniasis, caused by the Leishmania parasite, often presents with various skin lesions, including hair loss, and is commonly associated with other systemic signs such as weight loss and lethargy. In regions where leishmaniasis is endemic, the disease often affects dogs, leading to the characteristic clinical signs. While other conditions can also cause alopecia, leishmaniasis is particularly noted for its geographic association and the specific clinical presentation seen in affected dogs. Recognizing the context of how the disease is transmitted (via sandflies) and its prevalence in stray dog populations provides additional support to why leishmaniasis is the most plausible explanation for the observed symptoms in this scenario.

9. What clinical association prompted changes in the formulation of equine dewormers?

A. Data on parasite resistance

B. New data demonstrating link between tapeworms and colic

C. Increased efficacy of older drugs

D. Decreased side effects in older horses

The correct answer is based on the growing recognition of the link between tapeworms and colic in horses. Research has demonstrated that certain types of tapeworms, particularly Anoplocephala perfoliata, can cause gastrointestinal disturbances that lead to colic, which is a common and potentially serious condition in equines. This association has prompted veterinarians and pharmaceutical companies to rethink their deworming strategies, leading to changes in formulation. With the understanding that targeting tapeworms may be crucial for preventing colic, equine dewormers have been updated to specifically address this issue. Thus, formulations have been modified to ensure that they effectively treat tapeworms, in addition to other parasites, as part of a comprehensive parasite management program in horses. This shift in focus is critical for improving equine health outcomes, particularly in preventing conditions like colic that can result in significant morbidity. The influence of parasite resistance on deworming practices, though important, is distinct from the immediate clinical impact of tapeworms on colic. Additionally, while increased efficacy of older drugs and reduced side effects in older horses are relevant considerations in the broader context of equine health and pharmacology, they do not specifically address the

10. What is the initial treatment step for puppies presenting with acute anemia suspected from hookworm infection?

A. Administer intravenous fluids

B. Prophylactically deworm with pyrantel pamoate

C. Perform a blood transfusion

D. Administer iron supplements

The initial treatment step for puppies presenting with acute anemia suspected from hookworm infection is to administer intravenous fluids. While the answer indicated may seem plausible for managing hookworm-related anemia, addressing the immediate health crisis that acute anemia can present is paramount. Hookworm infections often lead to significant blood loss and anemia, requiring supportive care, including restoring blood volume and improving circulation. Intravenous fluids help stabilize the puppy by maintaining blood pressure, improving hydration status, and potentially enhancing organ perfusion. This step is critical, especially when the dog may be experiencing shock due to significant blood loss. While deworming and providing iron supplements are important components of managing a hookworm infection and its consequent anemia, they may not directly address the acute emergency the animal is facing at that moment. It is essential to stabilize the puppy first, alleviating the immediate risk to its health before proceeding with further treatment options such as deworming or administering iron. Blood transfusions might be required if the anemia is severe, but the typical first step is supportive care involving fluids. In conclusion, the focus of initial treatment in these cases should be on restoring hydration and circulation to support the puppy's stability, which makes the administration of intravenous fluids the correct approach in this situation.