

**Page 1 (4 minutes)**

You are evaluating a 10-year-old Arabian mare with an 18-hour history of persistent signs of moderate abdominal pain. The mare is 10 months pregnant. On rectal examination, you palpate a tight band of tissue coursing diagonally from left cranial dorsal to right caudal ventral across the top of the uterus. On the right side, you palpate a taut band more vertically oriented extending ventral to the uterus. No other abnormalities are palpable within the abdomen. Heart rate = 60 bpm; peritoneal paracentesis – clear to yellow, total solids < 2.0 g/dl; nasogastric reflux = 0.

1. What is your diagnosis?

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2. List **two** surgical approaches for managing this problem. Be specific.

A. \_\_\_\_\_

B. \_\_\_\_\_

3. List one NON-surgical approach for managing this problem. (**BE SPECIFIC** and describe the technique)

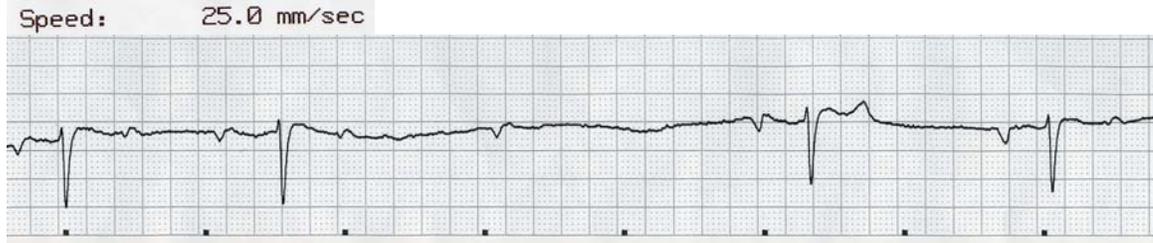
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**Page 2 (4 minutes)**

You auscult an arrhythmia during the physical examination. An ECG is performed.



2. List 3 possible causes of this arrhythmia.

- A. \_\_\_\_\_
- B. \_\_\_\_\_
- C. \_\_\_\_\_

3. What class of drugs should be avoided for premedication of this mare?

\_\_\_\_\_

4. List **three** reasons why you should avoid this class of drugs for pre-medication in this mare?

- A. \_\_\_\_\_
- B. \_\_\_\_\_
- C. \_\_\_\_\_

**Page 3 (4 minutes)**

You elect to correct the clockwise uterine torsion using a right flank laparotomy.

1. Name the layers A – C penetrated during this approach in the image.

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

2. What is the principal difference between a grid and a modified grid incision?

\_\_\_\_\_

3. How will you correct the uterine torsion using the right flank approach?

\_\_\_\_\_

\_\_\_\_\_

4. How would you determine the uterus is correctly repositioned?

\_\_\_\_\_

5. List 2 methods for assessing fetal viability.

A. \_\_\_\_\_

B. \_\_\_\_\_

**Page 4 (4 minutes)**

The mare is re-admitted to your hospital one month later, at 333 days of gestation in dystocia. The mare has been in active or in stage 2 labor for 20 minutes. The experienced farm veterinarian attempted assisted vaginal delivery but was unsuccessful. The foal is alive.

1. Describe the presentation and malposture of the foal shown in the image.

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2. The mare is straining and kicking. Based on the historical information listed above, what procedure will you perform in an attempt to extract the foal?

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3. List **TWO** manipulations to correct this malposture.

A. \_\_\_\_\_

B. \_\_\_\_\_

4. What event concludes each stage of labor?

**Stage one:** \_\_\_\_\_

**Stage two:** \_\_\_\_\_

**Stage three:** \_\_\_\_\_

**Question 5 (4 minutes)**

1. List 3 ways that the technique shown in the image facilitates delivery of the foal.

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

2. During the procedure, the anesthetist obtains an arterial blood gas. Interpret this blood gas.

Patient temp. 98.6°F  
pH 7.216  
pCO<sub>2</sub> 64.7 mmHg  
pO<sub>2</sub> 116.2 mmHg  
HCO<sup>-3</sup> 26.0 meq/l

\_\_\_\_\_

3. What is the most likely cause of this abnormality?

\_\_\_\_\_

4. List TWO techniques used to treat this abnormality.

A. \_\_\_\_\_

B. \_\_\_\_\_

5. You have tried for 15 minutes to correct this malposture without success. The owners want what is best for the mare and the foal. What procedure should you recommend next?

\_\_\_\_\_

**Question 6 (2 minutes)**

You have elected to perform a c-section on the mare. The mare is anesthetized, positioned in dorsal recumbency, and prepared for surgery.

1. What disinfecting agent is contained in Nolvasan?

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2. What is the mechanism of action of this agent?

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**Question 7 (4 minutes)**

1. Name the anatomical parts of the foal's hind limb contained within the uterus in **image 1**.

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

2. Your incision into the uterus will be between which 2 letters in **image 1**?

\_\_\_\_\_

3. Identify the following structures in the **image 2**.

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

4. Name the structure in **image 3**.

\_\_\_\_\_  
\_\_\_\_\_

**Page 8 (4 minutes)**

The foal is extracted and transferred to the resuscitation team.

1. What technique is being performed in **image 1** and why?

**Technique:** \_\_\_\_\_

**Why:** \_\_\_\_\_

2. What technique is being performed in **image 2**?

\_\_\_\_\_  
\_\_\_\_\_

3. What is the purpose of the technique being performed in **image 2**?

\_\_\_\_\_  
\_\_\_\_\_

4. Why is it necessary in mares compared to cows to perform the technique shown in **image 2**?

\_\_\_\_\_  
\_\_\_\_\_

**Page 9 (4 minutes)**

1. Name the suture patterns shown in images 1 – 4.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

2. List an appropriate suture type and suture size for uterine closure.

Suture type: \_\_\_\_\_

Suture size: \_\_\_\_\_

3. List **two** suture patterns that would be appropriate for closing the final layer of the uterus.

Pattern 1: \_\_\_\_\_

Pattern 2: \_\_\_\_\_

**Page 10 (4 minutes)**

The mare recovers well from anesthesia. Three hours after surgery, the mare's heart rate is 80 beats per minute, and she is lying down and sweating. You perform an abdominal ultrasound examination and peritoneal paracentesis on the mare.

1. Identify the A and B on the ultrasound image.

A. \_\_\_\_\_

B. \_\_\_\_\_

2. Based on the ultrasound image and the peritoneal fluid, what is the mare's problem?

\_\_\_\_\_

3. List THREE possible causes for this abnormality.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

### Question 11 (4 minutes)

The mare responds well to your therapy and is discharged from the hospital 5 days later. The owners are interested in re-breeding the mare this season. The mare returns to your hospital 60 days later for a breeding soundness examination. The speculum examination is shown in the image.

1. What is your diagnosis?

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2. How could this affect the mare's fertility?

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3. What factor determines whether or not this injury must be repaired?

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4. The surgery should be performed during what phase of the mare's reproductive cycle and why is this important?

**Cycle:** \_\_\_\_\_

**Why:** \_\_\_\_\_

**Question 12 (4 minutes)**

1. You elect to repair the cervical laceration. Name the structures shown in the images.

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

2. You choose to perform a 3 - layer closure. List the 3 layers.

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_ ]

3. What is the holding layer?

\_\_\_\_\_

4. How long should the farm veterinarian wait before palpating the cervix following repair?

\_\_\_\_\_

5. What is the reported pregnancy rate following cervical laceration repair?  
**Circle the correct answer.**

**40 –50%**

**50 –60%**

**70– 80%**

**80-90%**