Small Animal Case-Based Examination

ORTHOPEDIC SECTION

PAGE 1 (4 minutes)

A 4.5 month old male Labrador retriever is presented with a 2-month history of a gradually worsening weight-bearing lameness of the left forelimb. The radiographs are from the affected left leg and the normal right leg.

1. List six radiographic abnormalities present on the left leg.

   A. _____

   B. _____

   C. _____

   D. _____

   E. _____

   F. _____

2. What is the specific diagnosis?

   _____

PAGE 2 (2 minutes)

1. What are four etiologies of this type of deformity in dogs?

   A. _____

   B. _____

   C. _____

   D. _____

PAGE 3 (2 minutes)

These are radiographs of the affected leg. The angle labeled **A** measured 43 degrees. The angle labeled **B** measured 65 degrees.

1. Describe one effective **surgical** treatment plan. Be specific.

2. If this were a different 4 month old Labrador with a mild deformity, (angle labeled **A** had measured 19 degrees and the angle labeled **B** measured 12 degrees), what would your treatment plan be?

PAGE 4 (2 minutes)

This is a "close up" **image** of the affected physis in this dog.

1. What is the most likely Salter-Harris classification for this injury?

   _____

2. What are four histologic zones of the normal physis?

   A. _____

   B. _____

   C. _____

   D. _____

3. What form of ossification would normally take place at this physis?

   _____

4. In this particular case, which two zones were most likely affected to cause this deformity?

   A. _____

   B. _____

5. If the cause of this deformity had been retained cartilaginous cores, which zone of the physis would have been most seriously affected?

   _____

PAGE 5 (2 minutes)

This **image** is a "close up" from the osteotomy of the radius, two months after beginning treatment.

1. What is the name of the process seen at this osteotomy site?

   _____

2. What is the zone labeled with the yellow arrow?

   _____

3. What is the form of ossification that develops in the zone labeled with the yellow arrow?

   _____

4. What are four steps in the ossification process at the osteotomy site in the order of occurrence?

   A. _____

   B. _____

   C. _____

   D. _____

PAGE 6 (2 minutes)

This device is similar to the one used on this dog.

1. What is the name of this device?

   _____

2. Axial micromotion is beneficial to generation and healing of bone. How much (mm) axial micromotion is desirable for this construct?

   _____

3. List five factors that affect the stiffness of the fixator construct at the osteotomy site.

   A. _____

   B. _____

   C. _____

   D. _____

   E. _____

4. Name two linear external fixator systems that could accomplish distraction osteogenesis.

   A. _____

   B. _____