Imaging of Arthritis

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1. Cervical ankylosis, thoracic kyphosis, widening of intercondylar notch, epiphyseal overgrowth, erosions, brachydactyly and “protrusion acetabuli” are radiographic characteristics of:
   A. Kawasaki disease
   B. Systemic lupus erythematosus
   C. Chronic recurrent multifocal osteomyelitis
   D. Juvenile idiopathic arthritis

   Correct Answer: D

References

2. “Whiskering” (bone proliferation), sacroiliac joint widening and sclerosis, subtalar joint space loss, erosions and bone marrow edema at tendinous insertions and calcaneal spurs are radiographic characteristics of:
   A. Dermatomyositis
   B. Juvenile spondyloarthropathy
   C. Hemophilic arthropathy
   D. Polyarteritis nodosa

   Correct Answer: B

References
3. **The intra-articular disk of the temporomandibular joint is a biconcave structure. What lies immediately posterior to the joint?**
   A. Enhancing synovial tissue
   B. Enhancing neurovascular and fatty tissue
   C. Nonenhancing fatty and fibrous tissue
   D. Bone

   **Correct Answer: B**

   **Rationale**
   Posterior to the disk lies tissue which is made of neurovascular and fatty tissue which enhances after contrast. One must make sure not to confuse enhancement of this tissue with enhancing synovium as no synovium is present in this location. Answer A is incorrect. Since no synovial tissue is present in this location answer A is wrong. Answer C is incorrect. While the tissue posterior to the disk is neurovascular and fatty, it shows avid enhancement. Answer C is wrong. Answer D is incorrect. While the posterior band is indeed attached to bone by posterior ligaments, no bone is present immediately posterior to the disk. Answer D is wrong.

   **Reference**

4. **During jaw opening the mandibular condyle translates anteriorly to the level of the articular eminence. What lies between the disc and the osseous articular eminence?**
   A. The suspensory condylar ligament
   B. Anterior band of the intra-articular disk
   C. The intermediate zone of the intra-articular disk
   D. Synovium.

   **Correct Answer: C**

   **Rationale**
   The intermediate zone of the intra-articular disk separates the bone of the condylar head from the bone of the articular eminence. Answer A is incorrect. In the closed mouth position the mandibular condyle lies immediately below the posterior band of the intra-articular disk. With jaw opening the mandibular condyle translates anteriorly to the level of the articular eminence. At the same time the intra-articular disk translates anteriorly. In the open mouth position normally, the condyle lies just below the intermediate zone of the intra-articular disk.

   Answer B is incorrect. There is no ligament lying in this location. There is no suspensory ligament attaching to the mandibular condyle. Answer A is wrong. The condyle lies below the intermediate zone of the intra-articular disk not the anterior band which continues to lie anterior and superior to the condylar head. Answer D is incorrect. Although the TMJ is a synovial joint, no synovial tissue lies immediately between the condylar head and the articular eminence.

   **Reference**
5. **Which of the following is NOT associated with a coagulopathy?**

   A. Venous malformation
   B. Congenital hemangioma
   C. Infantile hemangioma
   D. Kaposiform hemangioendothelioma

   **Correct Answer: C**

   **Rationale**

   The term “infantile hemangioma” will sometimes be misapplied to lesions that can cause a coagulopathy, such as the large solitary congenital hemangiomas of the liver and soft tissue, visceral, or bony venous malformations. Incorrect answers: A) Venous malformation. These congenital anomalies cause a chronic localized intravascular/intralesional coagulopathy with elevated D-dimer and mild to moderate thrombocytopenia. B) Congenital hemangioma. The rapidly involuting subtype of congenital hemangioma (RICH) may cause a mild to moderate transient thrombocytopenia with or without a consumptive coagulopathy and elevated D-dimer. This coagulopathy is sometimes confused with the Kasabach-Merritt phenomenon. D) Kaposiform hemangioendothelioma (KHE). KHE is an intermediate grade, locally invasive neoplasm typically found in infants. This lesion causes the true Kasabach-Merritt phenomenon (KMP), which consists of a consumptive coagulopathy with a severe and sustained thrombocytopenia and hypofibrinogenemia with elevated D-dimer.

   **References**


6. **Which imaging feature separates Gorham-Stout disease from Generalized Lymphatic Anomaly (GLA)?**

   A. Splenic lesions
   B. Pleural effusions
   C. Bone lesions
   D. Cortical bone destruction

   **Correct Answer: D**

   **Rationale**

   Gradual or rapid loss of bony cortex (osteolysis) in association with a microcystic lymphatic malformation is the hallmark of “Gorham’s vanishing bone disease” (Gorham-Stout disease) and is not technically found with GLA. Incorrect answers: A) Splenic lesions, B) pleural effusions, and C) bone lesions can be seen with either Gorham-Stout disease or GLA, though involvement of the spleen and pleura occurs more frequently in GLA.

   **References**