ANSWERS AND ADDITIONAL INFORMATION FOR ORTHOPAEDIC CLINICAL QUIZ

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Answers 1

a). i. Loss of congruence of femoral head with acetabulum
ii. Disruption of Shenton's line
iii. Femoral head superimposes roof of acetabulum
iv. Decreased visualisation of lesser trochanter due to internal rotation of femur
b). Left posterior hip dislocation
c). i. Left hip and knee in slight flexion.
ii. Left hip in adduction, and internal rotation
d) i. Post reduction CT-scan
ii. Reasons: Need to look for
• Femoral head fractures
• Loose bodies
• Acetabular fractures
e) i. Non-operative
• Emergent closed reduction of hip dislocation within six hours
ii. Operative
• ORIF for the posterior left acetabular wall

Answer 2

a) i. Surgical neck fracture of left humerus
ii. 2-part fracture
iii. Generalised osteoporosis
iv. Medial displacement of the distal fragment with minimal interfragmentary
contact
b) Pathological fracture surgical neck of left humerus
c) i. Pectoralis pulls shaft anterior and medially
ii. Humeral head and attached tuberosities stay neutral
d) Neer's 2-part fracture
e) i. Pain management
ii. Rule out pathological causes
iii. Open reduction and internal fixation

Answer 3

a) i. Narrowing of joint spaces over the medial and lateral compartment
ii. Generalised osteopenia
iii. Tricompartmental arthritis
iv. Calcification of popliteal artery
b) i. Right knee tricompartmental osteoarthritis
ii. Grade 4 Kellgren-Lawrence
c) i. Inflammatory arthritis
ii. Gouty arthritis
iii. Septic arthritis
d) i. Kelgren-Lawrence classification
ii. Stage 1 to 4 description details
e) ABSI, angiogram, surgery without tourniquet

Answer 4

a) i. Intra-articular fracture over the medial condyle of the left tibial plateau
ii. Posterior condylar fracture of the left tibial plateau
b) Fracture of the left medial tibial plateau
c) Schatzker IV
d) Compartment syndrome
e) i. Pain management (painkiller, immobilisation)
ii. Pre-operative optimisation
iii. CT-Scan (3D) of the left knee for pre-operative planning
iv. Open reduction and plating KIV bone grafting
v. Early ROM exercise

Answer 5

a) i. Gangrene of the left 4th and 5th does.
ii. Necrotic patch extending dorsally from the base of the 4th and 5th toes up to anterolateral aspect of the ankle
iii. Necrotic patch over plantar aspect of the midfoot
iv. The lesion appears to be dry
v. No pus discharge, ulcer seen
b) Wagner classification, grade 4
c) i. Blood investigations:
• Full blood count – white cell count is increased in the presence of infection
• Blood culture and sensitivity – to determine presence of bacteraemia.
• Renal profile – to assess kidney function, rule out acute kidney injury (AKI) in the case of sepsis, chronic kidney disease (CKD) for long standing DM
ii. Radiological investigations:
• Radiograph of the legs: to look for gas shadow within the soft tissue
indicating Gas Gangrene
• CT angiogram of the leg: if the patient is not in sepsis. In severe peripheral vascular disease, this is an additional information to determine the level of amputation

Answer 6

a) i. Incomplete fracture of the distal end of the left radius
ii. Buckling over radial and dorsal cortex
b) Torus fracture / Buckle fracture of distal end of left radius
c) i. Bayonetting < 1cm,
ii. Angulations < 10°
iii. Malrotation < 30°
iv. Dorsal angulation < 20°
d) i. Pain management
ii. Immobilisation in below elbow cast / pre-fabricated removable wrist splint for two to three weeks
iii. No reduction needed
iv. Limited follow-up