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Femoral lengthening in children (Horn A, Sipilä M)

1. In this study, the most common diagnosis resulting in leg length discrepancy was:

- | | |
|----------------------------------|---|
| a. Post-infectious growth arrest | A |
| b. Post-traumatic growth arrest | B |
| c. Hemihypertrophy | C |
| d. Congenital short femur | D |
| e. Achondroplasia | E |

2. Fifty per cent of patients in this study sustained a fracture either through or adjacent to the regenerate bone. Which factor was not associated with an increased rate of fracture?

- | | |
|---|---|
| a. Healing index | A |
| b. Underlying diagnosis of congenital short femur | B |
| c. Level of the osteotomy | C |
| d. Percentage length gained | D |
| e. Absolute length gained | E |

3. Regarding the mean healing index (HI) in this cohort of patients:

- | | |
|---|---|
| a. The HI was comparable to other published series | A |
| b. There was a significant association between the HI and the amount of length obtained | B |
| c. An increased HI was associated with a higher rate of deep pin-site infection | C |
| d. The HI was increased in patients with congenital shortening of the femur | D |
| e. A decreased HI was not associated with an increase in fracture rate | E |

An epidemiology of paediatric cervical spine injuries at the Red Cross War Memorial Children's Hospital over a ten-year period (Noconjo L, Horn A)

4. The following are the characteristics of paediatric cervical spine anatomy *except*:

- | | |
|--|---|
| a. Increased ligamentous laxity | A |
| b. Wedge-shaped vertebral bodies | B |
| c. Cervical lordosis | C |
| d. Pseudo-subluxation | D |
| e. Horizontal orientation of the facet joint | E |

5. In this study, the most common cause of injury was:

- | | |
|---------------------------------|---|
| a. Physical abuse | A |
| b. Motor vehicle accident (MVA) | B |
| c. Recreation and sports | C |
| d. Drowning | D |
| e. Gun shot | E |

6. Children under 8 years of age sustained most cervical spine injuries at:

- | | |
|----------|---|
| a. C1–C4 | A |
| b. C1–C2 | B |
| c. C3–C4 | C |
| d. C2–C7 | D |
| e. C5–C7 | E |

18F-FDG PET/CT as a modality for the evaluation of persisting raised infective markers in patients with spinal tuberculosis (Davis JH, Burger MC, Pienaar G, Lamberts RP)

7. A positive Gene Xpert test on tissue from a site with increased activity on a 18F-FDG PET/CT scan could fit with:

- | | |
|---|---|
| a. The presence of tuberculosis bacterial DNA in a healed TB lesion | A |
| b. A myeloproliferative condition | B |
| c. An alternate type of granulomatous infection | C |
| d. A metastatic lesion | D |
| e. All of the above | E |

8. The only way to confirm the diagnosis of ongoing spinal tuberculosis infection after initial chemotherapy, is with:

- | | |
|---|---|
| a. Persistent raised ESR > 100 | A |
| b. A positive 18F-FDG PET/CT scan | B |
| c. A positive Gene Xpert test | C |
| d. Histology showing a predominant leucocyte infiltrate | D |
| e. Histology showing granulomatous inflammation | E |

9. The incidence of multi-drug resistant TB (MDR-TB) of the spine, as reported in this study and other supporting Western Cape-based studies, falls in the following range:

- | | |
|-----------|---|
| a. 1–5% | A |
| b. 5–15% | B |
| c. 15–25% | C |
| d. 1–3% | D |
| e. 5–25% | E |

The accuracy of pre-operative digital templating in total hip arthroplasty performed in a low-volume, resource-constrained orthopaedic unit (Wiese KR, Kock FW, Blake CA, Franken T, Jordaan JD)

10. The goals of total hip arthroplasty include:

- | | |
|---|---|
| a. Restoration of normal hip biomechanics only | A |
| b. Pain relief only | B |
| c. Pain relief, total correction of leg length discrepancy and no improvement in function | C |
| d. Pain relief, restoration of normal hip biomechanics and improvement in function | D |
| e. None of the above | E |

11. In the templating process, as described by Bono, step 2 consists of:

- | | |
|--|---|
| a. Determining if a leg length discrepancy is present | A |
| b. Determining the pelvis axis | B |
| c. Determining the centre of rotation of the hip joint | C |
| d. Determining the size of the femoral stem component | D |
| e. None of the above | E |

12. Katz *et al.* define a high-volume arthroplasty unit as the following:

- | | |
|-----------------------------------|---|
| a. More than 500 cases annually | A |
| b. More than 1 000 cases annually | B |
| c. More than 250 cases annually | C |
| d. More than 100 cases annually | D |
| e. None of the above | E |

Surgical anatomy of the sciatic nerve and its relationship to the piriformis muscle with a description of a rare variant (Asmall T, Gunston G, Venter R, Henry BM, Keet K)**13. What is the nerve root origin of the sciatic nerve?**

- | | |
|-----------------------|---|
| a. L4, L5, S1, S2, S3 | A |
| b. L5, S1, S2, S3, S4 | B |
| c. S1, S2, S3, S4, S5 | C |
| d. L3, L4, L5, S1, S2 | D |
| e. L2, L3, L4, L5, S1 | E |

14. In which region of the lower limb does the sciatic nerve most commonly bifurcate into the common fibular and tibial nerves?

- | | |
|----------------------------|---|
| a. Gluteal | A |
| b. Superior third of thigh | B |
| c. Inferior third of thigh | C |
| d. Popliteal | D |
| e. Middle third of thigh | E |

Intramedullary nailing of tibial non-unions using the suprapatellar approach: a case series (Botma N, Graham S, Held M, Laubscher M)**15. The advantages of the suprapatellar nail above the infrapatellar nail include the following *except*:**

- | | |
|---|---|
| a. Easier and improved tibial alignment | A |
| b. Improved post-operative knee range of motion | B |

- | | |
|--|---|
| c. A decrease in the incidence of post-operative sepsis | C |
| d. A decrease in the incidence of anterior knee pain | D |
| e. Enabling a straight working channel for reamers in knee extension | E |

16. The surgical technique is this study included:

- | | |
|--|---|
| a. Reamed intramedullary nail using the suprapatellar approach | A |
| b. Insertion of blocking (Poller) screws if needed | B |
| c. Fibula osteotomy if fibula united | C |
| d. Fracture site compression (controlled compression) | D |
| e. All of the above | E |

17. What was the union rate in this study?

- | | |
|---------|---|
| a. 100% | A |
| b. 95% | B |
| c. 90% | C |
| d. 80% | D |
| e. 60% | E |

Bursal synovial chondromatosis overlying a solitary osteochondroma of the distal femur: a case report (Tanwar Y, Potgieter M, Oosthuizen M, Schubert P, Ferreira N)**18. Which of the following might indicate malignant transformation of an osteochondroma?**

- | | |
|---|---|
| a. Acute onset of pain following direct trauma to a pedunculated osteochondroma | A |
| b. Increase in size during puberty | B |
| c. Pain following physical exertion, like playing soccer | C |
| d. Presentation with multiple osteochondromas | D |
| e. Progressive enlargement after skeletal maturity | E |

19. Osteochondromas represent true neoplastic lesions because:

- | | |
|---|---|
| a. Both sporadic and hereditary forms are encountered | A |
| b. They have potential for malignant transformation | B |
| c. They have the potential to grow during skeletal growth | C |
| d. They may be irritated by overlying structures | D |
| e. They show underlying genetic abnormalities | E |

20. Osteochondromas have been shown to have underlying genetic abnormalities in which of the following genes?

- | | |
|----------------------|---|
| a. C-MYC and C-FOS | A |
| b. EWSR1 and FLI1 | B |
| c. EXT-1 and EXT-2 | C |
| d. HER2/neu and MDM2 | D |
| e. TP53 and RB1 | E |

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