

Azra Naheed Medical College
Bone & Joints Urogenital System (13 Feb 2020)
(MBBS. 4th Year)
(Pathology-Objective Part)

ana Armani

Time Allowed: 30 min

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Total Marks: 25

Name: Sanaullah

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Date: _____

Q-1 A study of patients with urothelial carcinoma of the urinary bladder is performed. Gross, microscopic, and molecular characteristics of these malignancies are analyzed. Survival is correlated with treatment. Which of the following findings in these malignancies is most likely to require radical cystectomy to improve survival?

- A Exposure to chemical carcinogens
- B Invasion of muscularis propria
- C Lack of response to BCG therapy
- D Origin from inverted urothelial papilloma
- E TP53 gene mutation.

Q-2 A 51-year-old woman with diabetic nephropathy has suprapubic pain with hematuria. On Cystoscopy 3- to 4-cm soft, yellow, slightly raised mucosal plaques are seen. Biopsy specimens of these lesions microscopically show mucosal infiltration by foamy macrophages with cytoplasmic granules and small, laminated mineralized concretions. Which of the following organisms is most likely to be found in her urine? *diagnosis*

- A Adenovirus
- B *Candida albicans*
- C *Chlamydia trachomatis*
- D *Escherichia coli*
- E *Schistosoma haematobium*

malakoplakia cystitis.

Q-3 A 5-year-old boy has a history of recurrent urinary tract infections and Physical examination shows an abnormal constricted opening of the urethra on the ventral aspect of the penis. There also is a cryptorchid testis on the right. What term best describes the child's penile abnormality?

- A Balanitis
- B Bowen disease
- C Epispadias
- D Hypospadias
- E Phimosis

Q-4 A 59-year-old man notices gradual enlargement of the scrotum with sensation of heaviness. Physical examination shows that scrotum is enlarged, boggy, and soft bilaterally. The transillumination test result is positive. What is the most likely diagnosis?

- A Elephantiasis
- B Hydrocele
- C Orchitis

- D Seminoma
- E Varicocele

Q-5 A 71-year-old, has nodule in prostate. Laboratory studies show a serum prostate-specific antigen (PSA) level of 17 ng/ml. Which of the following histological findings is most likely to be found in a subsequent biopsy specimen of his prostate?

- A Acute prostatitis
- B Adenocarcinoma
- C Chronic abacterial prostatitis
- D Nodular hyperplasia
- E Prostatic intraepithelial neoplasia

Q-06 A 25-year-old man and his wife undergo an infertility workup. On physical examination he has descended testes that appear decreased in size. A sperm count shows azospermia. A testicular biopsy is performed and on microscopic examination only Sertoli cells are present in the seminiferous tubules. Which of the following laboratory test findings is he most likely to have?

- A. Increased FSH
- B. Increased HCG
- C. Increased alpha-fetoprotein
- D. Decreased testosterone
- E. Increased TSH

Q-07 A 30-year-old man has had a feeling of heaviness and enlargement of the left testis. An ultrasound reveals a 4 cm solid mass. Laboratory findings included a serum beta-HCG of 5 IU/L and alpha-fetoprotein of 2 ng/mL. The left testis is removed and with on sectioning reveals a firm, lobulated light tan mass without hemorrhage or necrosis. Which of the following neoplasms is he most likely to have?

- A. Choriocarcinoma
- B. Embryonal carcinoma
- C. Seminoma
- D. Yolk sac tumor
- E. Leydig cell tumor

Q-08 A 70-year-old healthy man has a firm nodule palpable in the prostate via digital rectal examination. Prostate biopsy performed and on microscopic examination show small, crowded glands containing cells with prominent nucleoli within the nuclei. Which of the following is the most likely diagnosis?

- A. Adenocarcinoma
- B. Nodular hyperplasia
- C. Chronic prostatitis
- D. Urothelial carcinoma
- E. Recent infarction

Q-09 A 23-year-old healthy man has been unable to father a child and his both testes are palpable and normal in size. However, the spermatic cord on the left has the feel of a 'bag of

worms'. Laboratory studies show oligospermia. Which of the following conditions is this man most likely to have?

- A. Hydrocele
- B. Testicular torsion
- C. Spermatocele
- D. Varicocele
- E. Seminoma

Q-10 A 72-year-old has a diffusely enlarged prostate palpated on digital rectal examination. Laboratory studies show his serum prostate specific antigen is 6 ng/mL. Which of the following pathologic findings is most likely to be present in this man?

- A. Adenocarcinoma
- B. Acute inflammation
- C. Multiple infarctions
- D. Nodular hyperplasia
- E. Granulomas

Q-11 A 20-year-old man has noted a penile discharge with some pain on urination for the last 2 days and there is a small amount of whitish exudate that can be expressed from the urethral meatus. The culture of the penile discharge reveals *Neisseria gonorrhoeae*. If untreated, which of the following complications is most likely to develop as a consequence of his disease?

- A. Aortitis
- B. Balanitis
- C. Epididymitis
- D. Orchitis
- E. Sacroiliitis

Q-12

31-year-old man has an enlarged right testis with a solid 5 cm mass.. Laboratory studies show a serum alpha-fetoprotein (AFP) of 81 ng/mL and human chorionic gonadotrophin (HCG) of 15 IU/L. A right orchiectomy is performed, and Microscopic examination shows cords and sheets of primitive cells with large nuclei. Which of the following is the most likely diagnosis?

- A. Teratoma
- B. Embryonal carcinoma
- C. Mumps orchitis
- D. Leydig cell tumor
- E. Choriocarcinoma

Q-13 A 95-year-old man has diffusely enlarged Prostate. A transurethral resection is performed. On microscopic examination there is glandular hyperplasia and a focus of grade 1,2 adenocarcinoma. Which of the following is the next most appropriate treatment plan for this man?

- A. Chemotherapy
- B. Alpha blocker therapy

- C. Radiotherapy
- D. Anti-androgen therapy
- E. No further therapy

Q-14 A 9-year-old boy has fever, swelling, tenderness, pain, and reduced range of motion of right hip joint and x-ray show areas of osteolysis and cortical erosion involving the femoral metaphysis with adjacent soft-tissue swelling extending from the subperiosteal region. Which of the following organisms is most likely to produce these findings?

- A *Haemophilus influenzae*
- B *Neisseria gonorrhoeae*
- C *Salmonella enterica*
- D *Staphylococcus aureus*
- E Group B streptococcus

Q-15 A 12-year-old girl has had sudden onset of severe pain in her left knee which was relieved by acetylsalicylic acid (aspirin). A radiograph of the left knee shows a well-defined, 1-cm lucent area surrounded by a thin rim of bony sclerosis located in the proximal tibial cortex. What is the most likely diagnosis of this lesion?

- A-Enchondroma
- B-Giant cell tumor
- C-Osteoblastoma
- D-Osteochondroma
- E-Osteoid osteoma.

Q-16 A 16-year-old boy has had pain around the right knee and radiograph shows an ill-defined mass involving the metaphyseal area of the distal right femur and is diagnosed as Osteoid osteoma. Which of the following tumor suppressor genes is most likely to be mutated in this boy?

- A- *APC*
- B- *BRCA1*
- C- *NF1*
- D- *PTEN*
- E- *RB*

Q-17A 38-year old man notes occasional pain in his right index finger and tenderness. A radiograph shows a 1-cm oval lucency in this phalanx, with a surrounding rim of bright, radiodense bone. Which of the following cells is most likely to have given rise to this lesion?

- A Chondrocyte
- B Giant cell
- C Macrophage
- D Osteoblast
- E Plasma cell

Q-18 A 45-year-old man has experienced pain in the area of the left hip and upper thigh and radiographs show an upper femoral metaphyseal mass. The proximal femur is excised and on sectioning has the gross appearance glistening gray-white translucent with myxoid areas. Which of the following cell types is most likely to be proliferating in this mass?

- A. Chondrocyte
- B. Osteoblast
- C. Osteoclast
- D. Plasma cell
- E. Primitive neuroectodermal cell

Q-19 A man of 64-year-old has had increasing back ache and right hip joint pain for the past decade which is worse at the end of the day and bony enlargement of the distal interphalangeal joints. A radiograph of the spine reveals the presence of prominent osteophytes involving the vertebral bodies. Which of the following diseases is he most likely to have?

- A. Gout
- B. Rheumatoid arthritis
- C. Osteoarthritis
- D. Osteomyelitis
- E. Lyme disease

Q-20 A 51-year-old man has noted constant, dull right hip pain and radiograph reveals a 10 x 13 cm mass involving the right ischium of the pelvis. which has irregular borders with extensive areas of bony destruction along with some scattered calcifications. The lesion is resected, and grossly the mass has a bluish-white cut surface. Which of the following is the most likely diagnosis?

- A. Osteosarcoma
- B. Enchondroma
- C. Osteblastoma
- D. Chondrosarcoma
- E. Paget sarcoma

Q-21 An 11-year-old boy has pain in his left leg and radiograph reveals a mass in the diaphysis of left femur. A bone biopsy on microscopic examination shows numerous small round blue cells. Karyotypic analysis of these cells shows t(11;22). Which of the following neoplasm is most likely to have?

- A. Ewing sarcoma
- B. Medulloblastoma
- C. Neuroblastoma
- D. Chondroblastoma
- E. Osteoblastoma

Q-22 A 43-year-old woman has severe systemic lupus erythematosus (SLE) with renal complications. She is treated with long-term corticosteroid therapy. Which of the following bone diseases is she most likely to develop?

- A. Paget disease of bone
- B. Rickets
- C. Osteochondritis
- D. Osteoporosis
- E. Osteomalacia

Q-23 An 83-year-old man has pain in his left knee which is warm, tenderness, and swelling. A radiograph of the knee shows chondrocalcinosis. Which of the following types of crystal is most likely to be identified in a joint aspirate from his left knee?

- A. Cholesterol
- B. Calcium hydroxyapatite
- C. Monosodium urate
- D. Magnesium ammonium phosphate
- E. Calcium pyrophosphate

Q-24 A 30-year-old man has pain in left knee. A radiograph reveals a 7 cm lytic lesion involving the epiphyseal region of the distal femur with a 'soap bubble' appearance. The lesion is curetted, and histologically there are numerous multinucleated cells in a stroma with plump to spindle shaped mononuclear cells. Which of the following is the most likely diagnosis?

- A. Osteosarcoma
- B. Chondrosarcoma
- C. Pleomorphic sarcoma
- D. Giant cell tumor
- E. Tuberculosis

Q-25 A 44-year-old man back pain and right hip pain which is worse at the end of the day. He has bony enlargement of the distal interphalangeal joints. A radiograph of the spine reveals the presence of prominent osteophytes involving the vertebral bodies. Which of the following diseases is he most likely to have?

- A. Gout
- B. Rheumatoid arthritis
- C. Osteoarthritis
- D. Osteomyelitis
- E. Lyme disease.