GENITOURINARY SYSTEM

Subject: **Pathology**

Lec NO.: **Test Bank-Male-MID**

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وَقُل رَّبِّ زِدْنِي عِلْمًا

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1. A 9-month-old boy is brought to the physician by his mother, who noticed that her son had developed scrotal swelling. Physical examination reveals a scrotal mass. The lesion can be transilluminated and is composed of clear serous fluid. What is the appropriate diagnosis?
   (A) Epididymitis
   (B) Hematocele
   (C) Hydrocele
   (D) Spermatocele
   (E) Varicocele
2. A 40-year-old Egyptian fisherman presents with painless hematuria. The patient's past medical history is significant for chronic schistosomiasis, which is endemic in his country of origin. Urinalysis shows malignant cells and cystoscopy reveals a mass in the wall of the urinary bladder. Which of the following is the most likely diagnosis?
   (A) Adenocarcinoma
   (B) Leiomyosarcoma
   (C) Papillary urothelial cell carcinoma
   (D) Squamous cell carcinoma
   (E) Urothelial cell carcinoma in situ
3. A 27-year-old man presents with acute and chronic inflammation of his glans penis. Which of the following is the most likely complication of chronic balanitis in this patient?
   (A) Carcinoma
   (B) Epididymitis
   (C) Epispadias
   (D) Hypospadias
   (E) Phimosis
4. A 65-year-old man presents with multiple lesions on his penis that he has had for 2 months. Physical examination reveals shiny, soft, erythematous plaques on the glans and foreskin. Biopsy of lesional skin shows neoplastic epithelial cells, connected by intercellular bridges, with invasion into the dermis. Which of the following is the appropriate histologic diagnosis for this patient's penile neoplasm?
   (A) Adenocarcinoma
   (B) Lichen planus
   (C) Melanoma
   (D) Squamous cell carcinoma
   (E) Urothelial cell carcinoma
5. A 60-year-old man with a history of nodular prostatic hyperplasia and recurrent cystitis presents with pain in the scrotum. His temperature is 38°C (101°F). Physical examination reveals a small, tender nodule attached to the testis. Which of the following is the most likely diagnosis?
   (A) Epididymitis
   (B) Orchitis
   (C) Spermatocele
   (D) Urethritis
   (E) Varicocele
6. An 8-year-old boy is brought to the physician because his parents noticed a mass on his left testicle. Physical examination reveals a solid mass that cannot be transilluminated, and biopsy shows a haphazard arrangement of benign differentiated tissues, including squamous epithelium, glandular epithelium, cartilage, and neural tissue. The left testicle was removed surgically, and the patient is symptom free 5 years later. Which of the following is the most likely diagnosis?
   (A) Embryonal carcinoma
   (B) Mature teratoma
   (C) Mixed germ cell tumor
   (D) Seminoma
   (E) Teratocarcinoma

ANSWERS:

1.C 2.D 3.E 4.D 5.A 6.B

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7. A 2-year-old boy is brought to the physician because his parents noticed a mass on his right testicle. Physical examination confirms the parents' observation. An orchiectomy is performed. Microscopic examination of the surgical specimen shows neoplastic cells forming glomeruloid Schiller-Duval bodies. Which of the following serum markers is most useful for monitoring the recurrence of tumor in this patient?
   (A) CA-125
   (B) Carcinoembryonic antigen
   (C) Estrogen
   (D) α-Fetoprotein
   (E) Human chorionic gonadotropin
8. A 3-month-old boy is brought to the physician because his parents cannot find one of his testicles. Physical examination confirms the parents' observation. Which of the following is the most likely diagnosis?
   (A) Anorchia
   (B) Cryptorchidism
   (C) Klinefelter syndrome
   (D) Macroorchidism
   (E) Male pseudohermaphroditism
9. The patient described in Question 8 develops a urogenital tumor 30 years later. An abdominal-pelvic CT scan reveals metastases to lumbar periaortic lymph nodes. Which of the following is the most likely pathologic diagnosis?
   (A) Leydig cell tumor
   (B) Malignant lymphoma
   (C) Renal cell carcinoma
   (D) Seminoma
   (E) Urothelial cell carcinoma of the bladder
10. A 16-year-old boy from Africa presents with a 5-day history of fever and testicular pain. Physical examination shows swollen, tender parotid glands and testes. Which of the following is the most likely responsible pathogen?
   (A) Haemophilus ducreyi
   (B) Human immunodefi ciency virus
   (C) Human papillomavirus
   (D) Mumps virus
   (E) Streptococcus pyogenes
11. A tall and slender 16-year-old boy presents with breast enlargement. Cytogenetic studies reveal a 47,XXY karyotype. Which of the following urogenital disorders is anticipated in this patient?
   (A) Anorchidism
   (B) Cryptorchidism
   (C) Hyperandrogenism
   (D) Polyorchidism
   (E) Testicular atrophy
12. During the physical examination of a newborn boy, the pediatrician notices that the urethral meatus is positioned on the lower side of the penile shaft. What is the appropriate diagnosis for this congenital birth defect?
   (A) Epispadias
   (B) Hydroureter
   (C) Hypospadias
   (D) Peyronie disease
   (E) Phimosis

ANSWERS:

7.D 8.B 9.D 10.D 11.E 12.C

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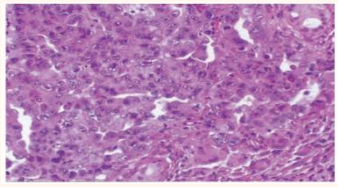
13. A 25-year-old man presents with a 4-week history of a painless mass in the scrotum. Physical examination reveals a testicular mass that cannot be transilluminated. Serum levels of AFP and hCG are normal. A hemiorchiectomy is performed. On gross examination, the testicular tumor shows foci of hemorrhage and necrosis. Microscopic examination of the tumor is shown in the image. The patient was cured by orchiectomy followed by chemotherapy. Which of the following is the most likely diagnosis?



(A) Choriocarcinoma
(B) Embryonal carcinoma
(C) Lymphoma
(D) Mature teratoma
(E) Yolk sac carcinoma

ANS:
13. B

WEBPATH:

14. A 25-year-old man and his wife undergo an infertility workup. His wife's reproductive function is normal. On physical examination he has descended testes that appear decreased in size. A sperm count shows aspermia. 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. Decreased muellerian inhibiting substance

ANS:
(A) CORRECT. Such a 'Sertoli cell only' syndrome is a cause for male infertility and may be idiopathic. A similar pattern would be present in a cryptorchid testis.

15. A 30-year-old man has had a feeling of heaviness in his left testis for the past 6 months. Physical examination reveals enlargement of the left testis, while the right testis appears normal. There is a palpable left inguinal lymph node. An ultrasound reveals a 4 cm solid mass within the body of the left testis. 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. He receives radiation therapy. 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

ANS:
(C) CORRECT. The most common pure form of testicular cancer is seminoma, a type of germ cell tumor which is radiosensitive. The tumor markers are not markedly elevated. This form of testicular carcinoma has the best prognosis overall, when not mixed with other elements.

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17. A 35-year-old man goes to his physician for a routine examination. On physical examination there is a left inguinal mass. The right testis is palpated in the scrotum and is of normal size, but a left testis cannot be palpated in the scrotum. An ultrasound scan shows that there is a 2 cm solid inguinal mass. Which of the following approaches is most appropriate to deal with this patient's testicular abnormality?
    A. Put the mass into the scrotum surgically
    B. Remove the mass along with the opposite testis
    C. Remove the mass
    D. Put the patient on testosterone therapy
    E. Put the patient on chemotherapy

ANS:

(C) CORRECT. A cryptorchid testis that is not treated in early childhood no longer functions in spermatogenesis and presents a risk for subsequent development of seminoma. The earlier in life that an orchiopexy is performed, generally under the age of 5, the more likely the testis will function properly. If the opposite testis were also cryptorchid, it would be at increased risk for development of carcinoma.

18. An epidemiologic study is performed to determine potential risk factors for development of penile squamous intraepithelial neoplasia. It is observed that persons who develop this disease are elderly men. The medical histories of these men are reviewed. Which of the following diseases is most likely to be found to precede development of penile neoplasia in these men?
    A. Phimosis
    B. Herpes simplex virus infection
    C. Lichen simplex chronicus
    D. Balanitis xerotica obliterans
    E. Epispadias

ANS:

(A) CORRECT. The chronic irritation from accumulation of secretions and smegma under the prepuce is the likely risk. Circumcision reduces the risk for development of penile carcinoma and can reduce transmission of infections as well.

19. A 32-year-old man reports increasing size and number of lesions in his genital region. On examination there are multiple 0.2 to 1 cm raised, smooth to rough-surfaced to verrucous pale pink plaques on the penis, scrotum, and perineum. No ulceration is observed. Which of the following organisms is most likely to result in his lesions?
    A. Chlamydia trachomatis
    B. Human papillomavirus
    C. Klebsiella granulomatis
    D. Treponema pallidum
    E. Hemophilus ducreyi

ANS:

(B) CORRECT. HPV produces genital warts and cancers, but not typically ulcers.

20. A 20-year-old man has noted a penile discharge with some pain on urination for the last 2 days. On physical examination there is a small amount of whitish exudate that can be expressed from the urethral meatus. Laboratory studies with culture of the penile discharge reveal Neisseria gonorrheae. If untreated, which of the following complications is he most likely to develop as a consequence of his disease?
    A. Aortitis
    B. Balanitis
    C. Epididymitis
    D. Orchitis
    E. Sacroiliitis

ANS:

(C) CORRECT. When the testis is involved by gonorrhea, it is typically the epididymis. Many male gonorrheal infections are asymptomatic and not followed by significant complications. Urethritis with stricture is a possible complication.

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21. A 31-year-old man has had a feeling of heaviness in his scrotum for over 6 months. On exam he has an enlarged right testis. An ultrasound reveals a solid 5 cm mass in the body of the right testis. 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 on gross examination the testicular mass is soft and reddish brown. Microscopic examination shows cords and sheets of primitive cells with large nuclei. Which of the following is the likely diagnosis?

    A Teratoma
    B Embryonal carcinoma
    C Leydig cell tumor
    D Squamous cell carcinoma
    E Choriocarcinoma

ANS:

(B) CORRECT. The embryonal carcinoma is likely to have an elevated AFP. Many malignant testicular neoplasms produce some detectable HCG, but this does not mean that choriocarcinoma is present.

22. A 22-year-old G2 P1 woman gives birth following an uncomplicated pregnancy to a term male infant weighing 2850 gm. On physical examination he has incomplete development of the dorsal aspect of the penile urethra, with the defect extending to the bladder, which is open onto the lower abdominal wall. Which of the following is the most likely diagnosis?

    A. Hypospadias
    B. Bowen disease
    C. Balanoposthitis
    D. Epispadias
    E. Paraphimosis

ANS:

(D) CORRECT. Epispadias is a rare congenital anomaly that may be mild or, as in this case, severe with a large open defect that must be repaired. The failure to close the bladder is termed exstrophy.

23. A study is conducted to document testicular abnormalities in adult male patients with no major medical problems who had biopsies performed for infertility workups. In some of these cases, the patients have normal sized testes but microscopic examination showing a patchy pattern of atrophy of testicular tubules. Which of the following infections is most likely to produce the findings seen in these men?

    A. Human papillomavirus
    B. Chlamydia trachomatis
    C. Neisseria gonorrheae
    D. Mumps virus
    E. Herpes simplex virus

ANS:

(D) CORRECT. This is a very common childhood infection (when vaccinations are not done) resulting in orchitis as well as parotitis. The inflammation rarely causes enough damage to produce a significantly reduced sperm count, if a childhood infection. The virus tends to produce more testicular damage when adults are infected.

24. A 40-year-old man has noted gradual enlargement of his scrotum, more on the right side, for the past 2 years. There is no associated pain, but the size is becoming uncomfortable. Physical examination reveals that the right side of the scrotum is enlarged to three times the size of the testis palpable on the left. This mass transilluminates. There is no tenderness on palpation. There is no inguinal lymphadenopathy. An ultrasound reveals a 5 cm thin-walled cystic fluid-filled area in the region of the right testis. Which of the following is the most likely diagnosis?

    A Seminoma
    B Torsion
    C Hydrocele
    D Varicocele
    E Orchitis

ANS:

(C) CORRECT. A hydrocele is just a fluid filled sac that gradually enlarges. It represents fluid collection between the parietal and visceral layers of the tunica vaginalis.

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25. A 33-year-old G3 P2 woman gives birth at term following an uncomplicated pregnancy to a male infant. On physical examination he has an abnormal opening of the urethra onto the ventral surface of the penis for a distance of 0.3 cm. Which of the following is the most likely diagnosis?

A. Hypospadias
B. Exstrophy
C. Phimosis
D. Epispadias
E. Cryptorchidism

ANS:

(A) CORRECT. This is a congenital anomaly. Infection is a common complication, and partial urethral stricture may lead to urinary tract obstruction.

26. A 45-year-old man complains of dysuria for the past week. On physical examination he is uncircumcised and has erythema and edema of the glans penis, with inability to retract the foreskin over the glans penis. Which of the following infectious agents is most likely to be associated with these findings?

A Human papillomavirus
B Staphylococcus aurs
C Herpes simplex virus
D Treponema pallidum
E Sarcoptes scabiei

ANS:

(B) CORRECT. He has balanitis with paraphimosis, and staphylococcal or streptococcal infections are most likely to be present.

27. A clinical study is conducted to determine the survival following treatment for testicular neoplasms utilizing subjects recorded into a hospital tumor registry. Treatments included surgery, chemotherapy, and radiation therapy. The patient records are reviewed to determine the pathologic diagnosis and the 5 year survivals for these patients. Which of the following types of testicular neoplasm is most likely to have responded best to radiation therapy?

A Choriocarcinoma
B Embryonal carcinoma
C Seminoma
D Teratoma
E Yolk sac tumor

ANS:

(C) CORRECT. Seminomas are the most radiosensitive of testicular carcinomas.

28. A 35-year-old man has a routine check of his health status. On physical examination the prepuce cannot be fully retracted from the glans of his penis. No other abnormalities are noted. Which of the following is the most likely diagnosis?

A Balanoposthitis
B Epispadias
C Exstrophy
D Hypospadias
E Phimosis

ANS:

(E) CORRECT. Inflammation with scarring may prevent full retraction. There is an increased risk for phimosis and for balanitis in uncircumcised males.

29. A 2-year-old boy is brought to the physician because his mother (a geometry teacher) has observed that his scrotum is no longer symmetrical. On physical examination the child has enlargement of the left testis. An ultrasound scan shows a 2 cm solid mass within the body of the testis. Laboratory studies show a serum alpha-fetoprotein of 226 ng/mL. Which of the following neoplasms is this child most likely to have?
    A Leydig cell tumor
    B Neuroblastoma
    C Rhabdomyosarcoma
    D Teratoma
    E Yolk sac tumor

ANS:
(E) CORRECT. The most common testicular tumor under the age of 3 is a yolk sac tumor (infantile embryonal carcinoma). However, finding any testicular tumor in children is uncommon. The prognosis is good in most cases.

30. A 43-year-old man has noted a lesion on his penis for the past year. On physical examination there is a 0.9 cm diameter rough, tan, firm, slightly raised area at the right lateral base of the glans. He is uncircumcised, and there is difficulty in retracting the foreskin. Which of the following is the most likely diagnosis?
    A Angiokeratoma
    B Balanitis xerotica obliterans
    C Bowen disease
    D Hard chancre
    E Lichen simplex chronicus

ANS:
(C) CORRECT. This is squamous cell carcinoma in situ. If excised at this stage, it is curable. If not treated, it can progress to an invasive carcinoma.

WEBPATH END

31. Bilateral cryptorchidism will most likely cause:
    A) Decreased sperm production
    B) Hyperplasia of the seminiferous tubules
    C) Increased susceptibility to HPV infection and genital warts
    D) Metaplasia of the seminiferous tubules
    E) Reduced risk of testicular cancer
32. About 2 months ago, a 28-year-old African American male began to experience of heaviness in his right testicle. Physical examination revealed a 4 cm nontender mass in the right testis. As a child, he had an undescended left testicle that was repaired by surgical intervention. His brother had a testicular germ cell tumor. What do you think are his risk factors for testicular cancer?
    A) He is 28
    B) He is African American
    C) He had cryptochidism
    D) Family history
    E) A+C+D
33. Bilateral cryptorchidism is most likely associated with:
    A) Infertility
    B) Hyperandrogenism
    C) Prostate cancer
    D) Apocrine metaplasia
    E) High estrogen unopposed by progesterone

ANS:
31.A 32.E 33.A