

## Pediatric Urology: Review Questions

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### QUESTIONS

Choose the single best answer for each question.

- A 1-week-old male infant has a large scrotal hematoma. What is the most likely cause?**
  - Rh incompatibility
  - Testicular tumor
  - Testicular torsion
  - Breech delivery
- A 2-day-old female infant has a large, firm, lower abdominal mass. She has had wet diapers in the nursery. Pelvic ultrasonography demonstrates a mass between the bladder and rectum. What is the most likely diagnosis?**
  - Ectopic ureterocele
  - Ovarian tumor
  - Hydrometrocolpos
  - Sacral tumor
- Extravaginal torsion of the testicle most commonly occurs in:**
  - Newborns
  - Young adults
  - Individuals with prune belly syndrome
  - Patients with posterior urethral valves
  - None of the above
- What is the histology of the most common solid tumor of the epididymis?**
  - Lipoma
  - Teratoma
  - Adenomatoid
  - Fibroma
  - Neuroma
- In the male fetus, the müllerian duct regresses during gestation. Thereafter, the only remnant is the:**
  - Appendix
  - Appendix testis and prostatic utricle
  - Epididymis
  - Prepuce
- The female counterpart of the male prostate is which of the following glands?**
  - Tyson's
  - Cowper's
  - Skene's
  - Bartholin's
  - None of the above
- A 4-year-old girl has a 3-month history of blood at the urinary meatus. Inspection of the vulvar region is normal. The introitus is normal with a 5-mm horizontal opening. Results of ultrasonography of the abdomen and pelvis are normal. What is the most appropriate diagnostic procedure?**
  - Repeat examination in 2 to 4 months
  - Voiding cystourethrography
  - Examination under anesthesia, cystoscopy, and vaginoscopy
  - Urine and vaginal cultures

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EXPLANATION OF ANSWERS

1. **(D) Breech delivery.** Breech delivery has been reported as causing a scrotal hematoma from excessive pressure and manipulation. No treatment is necessary. Breech delivery is associated with direct trauma to the scrotum; a hematoma may develop. In this age group, testicular torsion is extravaginal, presents as a painless hard mass in the scrotum, and is often associated with a hydrocele. This form of torsion results in loss of the testicle in almost all patients. A testicular tumor is extremely rare in the newborn and presents as a mass.
2. **(C) Hydrometrocolpos.** The mass in this female infant is hydrometrocolpos. This mass is caused by fluid distension of the vagina and uterus, vaginal obstruction, and excessive secretion of cervical glands in response to circulating maternal estrogens. The vaginal obstruction may result from an imperforate hymen but is more commonly caused by vaginal atresia.
3. **(A) Newborns.** Extravaginal torsion is a urologic emergency that occurs in newborns. This torsion is not related to prematurity, low birth weight, or traumatic delivery. Physical examination reveals enlargement and induration of the scrotal contents. The differential diagnoses are hydrocele, hematocele, incarcerated inguinal hernia, thrombosis of the spermatic cord, and testicular neoplasia. The treatment of torsion is immediate surgery. If a nonviable testis is found, it is removed. Many urologists also perform an orchiopexy of the contralateral testis.
4. **(C) Adenomatoid.** The histology of the most common solid tumor of the epididymis is adenomatoid tumor. This tumor is small, solid, and asymptomatic. Microscopically, adenomatoid tumors have epithelial-like cells and fibrous stroma. These tumors behave in a benign fashion. No metastasis has ever been reported.
5. **(B) Appendix testis and prostatic utricle.** The remnants of the müllerian duct system in the male are the appendix testis, prostatic utricle, and the colliculus seminalis. Regression of the müllerian duct system in the male fetus begins at 8 to 9 weeks of gestational age as a result of the secretion of müllerian-inhibiting substance and testosterone. The female reproductive tract is formed from the müllerian ducts. Müllerian derivatives in the female become the oviduct, uterus, cervix, and the upper portion of the vagina.
6. **(C) Skene's.** The female counterpart of the male prostate are the Skene's glands. These glands are in the periurethral region of the distal female urethra. Skene's glands drain into the floor of the urethra just inside the urinary meatus. Occasionally, these glands become obstructed and a cyst and/or abscess may develop. A cyst may resolve spontaneously; however, an abscess requires incision and drainage. Bartholin's glands drain into the vaginal wall. A Bartholin's gland abscess requires incision and drainage.
7. **(C) Examination under anesthesia, cytoscopy, and vaginoscopy.** The differential diagnoses include sexual abuse and tumors. Examination under anesthesia, cytoscopy, and vaginoscopy leads to the diagnosis. The most common bladder malignancy in this age group is rhabdomyosarcoma. Also, rhabdomyosarcoma of the vagina is a diagnostic possibility. Rhabdomyosarcoma is the most common soft tissue sarcoma in childhood. The bladder tumor may present with hematuria; the vaginal tumor may present with a bloody discharge.

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*Adapted from Moss E, Connor JP: Pediatric urology. Hospital Physician Urology Board Review Manual 1995:3(3).*

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