The importance of a good physical examination cannot be underestimated. A good clinician must be able to differentiate normal from abnormal findings and should be familiar with both function (see Table 1) and location (see Table 2) of the organs involved. It may be as subtle as a mole that has changed slightly from last examination or as obvious as a new lesion that is draining.

Obtaining the History

Many diseases and medications can affect the urinary system and its function. The initial interaction with a patient should begin in a nonthreatening way, by reviewing his medical-surgical history and his current medications. A complete assessment of the male reproductive system includes a thorough review of the patient’s history, since many conditions may present as complaints of pain to the reproductive structures. Pain from a kidney stone can radiate along the spermatic cord and present as testicular pain. Difficulty starting the urinary stream and complaints of perineal tenderness may indicate prostatitis or benign prostatic hypertrophy. Urethral pain can be a result of prostatitis, sexually transmitted diseases, or recent instrumentation. Urgency and frequency may be due to bladder dysfunction, a urinary tract infection, or treatment for low-grade bladder cancer. Complaints of a lump in the scrotum can be an inguinal hernia. It is always important to discuss and clarify the details of any previous genitourinary (GU) surgeries, particularly if they occurred during childhood. Details of any previous treatment for GU diseases or complaints should be discussed. Ask the patient whether he has been treated recently in an emergency department for the presenting problem or any other problem.

There are some conditions for which a physical examination is only modestly helpful. Erectile dysfunction cannot be seen or felt during a physical examination; therefore, this issue should be discussed with the patient. Ask about his relationship(s) and about his level of sexual satisfaction. If the patient has diabetes, hypertension, or depression and takes medication for these conditions, he may have erectile problems but may be too embarrassed to talk about it. A statement such as “Diabetes often causes erectile dysfunction. Have you encountered any problems getting an erection?” or use of a standardized questionnaire may encourage the patient to discuss the problem more openly (for example, the Sexual Health Inventory for Men [SHIM] by Rosen, Cappaleri, Smith, Lipsky, & Pena, 1999).

Examination Basics

Upon entering the examination room, the clinician should greet the patient appropriately with an introduction including the clinician’s title. The patient should be asked what he would prefer to be called. This simple introduction can help reduce anxiety, particularly when the specific encounter is related to a man’s sexual or urological health. If a genital examination is necessary, permission is asked before beginning the examination. This is especially important when the clinician is a female, since it allows the patient to decline gracefully if he prefers a male clinician to perform this part of the examination. Genital examination should be done last if this is a full physical examination, in order to reduce embarrassment and to allow time for the patient to become comfortable with the overall interaction. A parent should always be present when examining an infant or minor. Adolescents should be asked if he would like to have anyone present during the examination. An adult male should be asked the same question, especially if he is accompanied by his wife. Social or cultural mores may dictate that the wife leave.
Assessment of the male genitalia (see Figure 1) is accomplished with inspection and palpation. Normally, only examination gloves and water-soluble lubricant are needed but a stethoscope and flashlight may be useful if the scrotal examination is abnormal. A stethoscope can be used to listen for bowel sounds if there is a concern for a hernia within the scrotal sac. The flashlight would be used to transilluminate the scrotum during an evaluation for a hydrocele. Prior to any examination, the index finger can be measured and used as a ruler to measure the penis, testes, and prostate.

With the patient in the supine position, only the genitalia are uncovered and two sheets are used, one to cover his chest/abdomen area and the other one to cover his legs. Privacy for the patient is always

<table>
<thead>
<tr>
<th>Organ</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penis</td>
<td>Protects the urethra; houses the corpora cavernosum which when engorged makes the penis rigid and erect; prepuce protects the glans penis.</td>
</tr>
<tr>
<td>Scrotum</td>
<td>Protective loose sac divided into two compartments for the internal organs: testis, epididymis, and vas deferens; temperature regulation of the testes.</td>
</tr>
<tr>
<td>Testes</td>
<td>Produce spermatozoa (seminiferous tubules) and testosterone.</td>
</tr>
<tr>
<td>Epididymis</td>
<td>Storage and transport of sperm cells; sperm maturation.</td>
</tr>
<tr>
<td>Ductus (Vas) deferens</td>
<td>Cord-like structure that transports sperm from the testis and epididymis into the urethra.</td>
</tr>
<tr>
<td>Spermatic cord</td>
<td>Protects the ductus (vas) deferens, internal and external spermatic arteries, artery of the vas, venous pampiniform plexus, lymph vessels, and nerves.</td>
</tr>
<tr>
<td>Prostate gland</td>
<td>Produces some of the seminal fluid; also produces a thin, white fluid that mixes with seminal fluid to neutralize the urethra and vagina to maintain sperm viability.</td>
</tr>
<tr>
<td>Seminal vesicles</td>
<td>Produces most of the seminal fluid.</td>
</tr>
</tbody>
</table>

**Table 1.**

**Function of Male Genital Organs**

**Table 2.**

**Developmental Changes in the Appearance of the Male Genital Organs**

**Source:** Barkauskas, Baumann, & Darling-Fisher, 2002.
The room should be warm enough for the patient to be comfortable. The patient should be asked if the room is warm enough. This is especially important in examining the elderly, since they may be less tolerant of the cold. The warm room will also avoid activation of the cremasteric reflex that causes the testes to ascend from the scrotum upward toward the pelvic cavity (Pulsifer, 2005). This reflex can also be provoked by touch. If possible, interruptions should be avoided after the examination is begun.

INSPECTION

Pubic Area/Penis

The patient's hair distribution pattern is examined (see Table 3). Does it correlate with his age? The suprapubic area is inspected for any rashes, lesions, folliculitis, scarring, nodules, bulges, or scratch marks (from a parasite). If the hair is full it will need to be parted during the examination. The inguinal/groin area is inspected. When the patient coughs or bears down there should not be any bulges or masses. If there are, this may indicate a hernia. A direct inguinal hernia would be near the external inguinal ring, while an indirect inguinal hernia would be at the internal inguinal ring (see Figure 2).

Penile growth rate is progressive and predictable (see Table 4). An abnormally small penis may be indicative of a clitoris, Klinefelter's or Down's syndrome (Gomella, 2002). An obese child may appear to have a small (retracted) penis secondary to overlying skin folds and large prepubic fat pad (Engel, 2002). A penis that is large relative to stage of development may suggest precocious puberty or a possible testicular tumor (Engel, 2002).
Prepuce/Foreskin

If the male is circumcised, the prepuce is removed, and the glans penis is exposed. For uncircumcised males the prepuce (foreskin) is retracted. The prepuce is normally adherent in children younger than 3 years of age. Older than 3 years of age, an attempt can be made to retract the prepuce, but it should not be forced (Engel, 2002). An unretractable prepuce may be indicative of phimosis and the patient should be referred to a urologist. Any drainage, lesions, scars, rash, or swelling are noted. There may be a white, cheesy substance, called smegma, and this is normal. The prepuce must always be replaced back over the glans (head of the penis). If the prepuce cannot be advanced over the glans, this is a condition called paraphimosis. The patient should be referred emergently to a urologist. Uncircumcised males are at a higher risk for penile cancer, with the glans being the first site and the prepuce the secondary site (see Table 5).

Glans Penis

To inspect the glans penis the prepuce must be retracted, if the male has not been circumcised. Any lesions, drainage, warts, scars, rash, skin texture, color, or swelling are noted. Inflammation of the glans is called balanitis and may be caused by a fungal infection or tinea. Balanoposthitis is inflammation of both the glans and prepuce (see Table 6).

If the male is uncircumcised, the prepuce is retracted to expose the glans penis. If the urethral meatus is located on the dorsal (upper side) surface it is called epispadias. If it is located on the ventral (under-side) surface it is called hypospadias and can be located anywhere on the ventral surface from the tip of the penis to the penoscrotal junction. Both of these disorders are congenital and are usually diagnosed at birth.

Urethral Meatus

When inspecting the urethral meatus, the glans is gently compressed between the index finger (positioned on the dorsal surface) and thumb (positioned on the ventral surface). This will open the meatus for inspection. Any discharge, warts, lesions, swelling, inflammation, and shape are noted. If the meatus is round this may be indicative of meatal stenosis secondary to repeated infection (Engel, 2002) (see Table 7). Many patients who have a sexually transmitted disease (STD) present with dysuria and penile discharge, but an asymptomatic patient could also have an STD. That is why issues of sexuality should be addressed during the examination, especially if an STD is suspected. Questions about the number of sexual partners, sexual preferences, whether the current relationship is monogamous, and condom use can be asked in a professional, nonjudgmental and nonthreatening manner. A clinician should never assume that elderly patients are not sexually active, especially if widowed or divorced. Keep in mind that symptoms associated with untreated gonorrhea could be interpreted as another disease more common in the elderly, such as prostate problems or arthritis (Grigg, 2000). Older adults may not use condoms since they do not perceive a risk of pregnancy. Many older adults do not understand STDs and their vulnerability to them. When examining a child or adolescent, sexual activity or sexual abuse should be suspected if genital warts are present. Both STDs and suspected sexual abuse are reportable events.
Shaft of Penis

The color of the skin on the shaft of the penis varies and the dorsal vein may be prominent. The skin is inspected for any lesions, scars, genital warts, rash, swelling, or noticeable nodules (see Table 8).

Scrotal Sac

When the ambient air is warm, the scrotal sac is more pendulous and the skin is smoother but when the ambient air is cold, the scrotal sac becomes contracted and the skin more wrinkled (see Table 9) (Swartz, 2002). Any rashes, genital warts, scars, lesions, or color changes are noted. Sebaceous cysts are common; these are cysts that have a waxy appearance and can become inflamed and drain a cheesy material. Pain, necrosis, and swelling of the scrotal sac in a diabetic male may be signs of Fournier’s gangrene; this is a urologic emergency. Any drainage, redness, bulges, lesions, or genital warts on the perineum are noted. The anal area is stroked to elicit the anal reflex. The anus should contract quickly. Slow reflex could indicate a disorder of the pyramidal tract (Engel, 2002).

If the scrotal sac appears “sunken in” on one side or both sides, the testicle(s) may be absent; an underdeveloped, non-pendulous hemiscrotum commonly indicates undescended testis (see Table 10). If the scrotal sac is edematous it may be indicative of a hernia or hydrocele. To differentiate between the two, a flashlight is placed against the scrotal sac posteriorly with the room dark (transillumination). If there is a red glow, it is likely a hydrocele. No light will transmit through a solid tumor. Another way to differentiate scrotal swelling is to “get above” the swelling. If this is possible, the swelling is scrotal and if not, the swelling is inguino-scrotal and most likely an inguinal hernia (see Figure 2).

In the elderly patient, thickening of the scrotal sac may occur in association with fluid retention which can be associated with cardiac, renal, or hepatic diseases (Gomella, 2002). Edema may also occur in epididymitis or other local inflammation and obstruction of the inguinal lymphatics (Jarvis, 2004).

PALPATON

Penis

The penis is palpated using the thumb and first two fingers. The penis should feel smooth, soft, and without tenderness. During palpation any tenderness, nodularity, or induration is noted. Tenderness along the ventral (underside) aspect of the penis is indicative of periurethritis, which is often secondary to urethral stricture. The patient should fill out the International Prostate Symptom Score (I-PSS), which is a helpful tool that addresses bladder emptying, frequency, intermittency, urgency, stream, and nocturia. This should be assessed annually and as needed. Curvature, nodularity, or induration of the penis suggests Peyronie’s disease. The
patient is asked if he is able to obtain an erection, and if so, whether there is any pain or curvature.

**Scrotum**

The skin of the scrotum is palpated using the thumb and first two fingers. The scrotal sac is divided into two compartments. The contents should slide easily. Abnormalities within the scrotal sac are hydroceles and hernias. A hydrocele is a collection of fluid that surrounds the testes, which can be transilluminated. Hydroceles can occur at any age. A hernia is a portion of bowel that protrudes into the scrotal sac. A hernia does not transilluminate but it may be possible to auscultate bowel sounds.

**Testes**

The testis is palpated gently with the thumb and first two fingers (see Table 11). Each testis is palpated separately; they should be ovoid, firm and smooth, much like a hard-boiled egg. The testis should feel suspended and move easily in each sac. The testes should have the same consistency and be nearly the same size. A firm nodule may indicate a testicular tumor. The testes can become infected (orchitis).

To prevent the cremasteric reflex during palpation in infants and young children, either a finger is held over the inguinal canal while palpating the scrotal sac or have the child sit cross-legged. Inability to palpate a testis in an infant may indicate cryptorchidism (undescended testis) and the tests may be palpated in the inguinal canal. The testis may descend on its own as the infant grows. If it has not descended by 1 year old, surgical correction should be done (McAninch, 2000). If the cryptorchid testis is not corrected, the male is at a higher risk of infertility and testicular cancer.

Testicular growth is a visible sign of sexual maturation. This can occur as early as age 10 years (Engle, 2002). A small (<3.5 cm) and soft testis may indicate atrophy as with cirrhosis, hypopituitarism, or may occur following estrogen therapy or androgen blockade. If the testis is smaller than 2 cm and alopeacia in the pubic region is noted, suspect Klinefelter’s syndrome (hypogonadism) (Jarvis, 2004).

**Epididymis/Ductus (Vas) Deferens/Spermatic Cord**

The epididymis is located on the posterior aspect of the testes. It is palpated gently with the thumb and first two fingers. The epididymis should be nontender, smooth, and feel softer than the testes. Palpate upwards toward the inguinal ring using only the thumb and index finger to feel the ductus (vas) deferens. It should feel smooth and be nontender. It feels like partially cooked spaghetti and is about 2 mm to 4 mm in diameter. Upward, a thicker cord (spermatic cord) is felt. It should also be smooth and nontender. Palpate the right side first, then the left side.

Abnormalities are infection of the epididymis, ductus (vas) deferens, and spermatic cord. The epididymis can also be nodular, which may indicate a cyst or tumor. If the vas deferens is absent, this is often associated with an absent kidney on the same side (Swartz, 2002). The spermatic cord may become tortuous which is a varicocele and feels like a “bag of worms.” The spermatic cord may also form a cyst after a vasectomy that is painless and contains sperm (spermatocele).

**Inguinal Area/Lymph Nodes**

The inguinal area is palpated for pulses, using the pads of the index, middle, and ring fingers. Decreased or absent pulses may indicate a vascular problem. The inguinal (superficial) and subinguinal (deep) lymph nodes are palpated. The lymph nodes are usually not felt. An enlarged lymph node may represent inflammation or metastatic disease spread from the genital or peri-anal area. Note any tenderness and size of lymph node.

**Prostate and Seminal Vesicle**

A normal prostate feels symmetrical, smooth, rubbery, without tenderness and the median sulcus is palpable; benign disease feels like the tip of a nose whereas a cancerous nodule feels more like a forehead (see Table 12). The prostate may also feel flat, indurated (hardened), boggy (spongy), or enlarged. Seminal vesicles lie cephalic to the prostate, are about 6 cm long and

### Table 11. Testes

<table>
<thead>
<tr>
<th>Infant/Child</th>
<th>Size 1.5 cm until puberty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adolescence/Adult</td>
<td>Approximately 4.0 to 5.5 cm in length, 2.5 cm in width.</td>
</tr>
<tr>
<td>Geriatric</td>
<td>Less firm and slightly smaller.</td>
</tr>
</tbody>
</table>

*Source: Rowland & Herman, 2002.*

### Table 12. Normal Prostate

4 cm wide, 2.5 to 3.0 cm long

*Source: Grayback, McVary, & Kozlowski, 2002.*
soft, normally nonpalpable; if they are palpable, this may be suspicious for cancer.

The digital rectal examination should be explained to the patient. Advise him to report any tenderness or pain experienced during the examination. The location of any significant discomfort or abnormality is identified by using the face of a clock as a reference point (for example, the 3 o’clock position on the rectum). The width of the clinician’s index finger (usually about 1.5 cm–2 cm) and the length of the finger can be measured and used as a reference to help measure the prostate.

If the patient is unable to stand, the rectal examination can be done in either the Sims’ or dorsal recumbent position. To place the patient in the Sims’ position, he should lie on his left side with his right thigh and knee, flexed as much as possible, over his left leg, which is also partially flexed. To place the patient in the dorsal recumbent position, have him lie on his back with his hips and knees bent (flexed), and feet flat on the examination table or mattress (if the patient is in the bed). Otherwise, have the patient stand on the floor. The scrotal sac is inspected again since hydroceles and hernias may be more prominent in the standing position. Any abnormalities not detected earlier with palpation are noted. The patient should turn around facing the examination table for the prostate examination. The patient is told to bend forward (flexing at hips) and rest his forearms and elbows on the table while bending his knees slightly. The patient is advised that the examination is about to begin. The buttocks are spread to inspect the rectal area for hemorrhooids, genital warts, discharge, or rashes. The rectal area is palpated for nodules and tenderness. The clinician’s gloved index finger of the dominant hand is lubricated. The clinician places it at the anal verge and the patient is instructed to bear down, as if he were having a bowel movement. This relaxes the rectal sphincter and allows for easy insertion of the finger. The index finger is inserted as far as possible, as the patient relaxes and breathes deeply. The sphincter tone is noted and the prostate is palpated using the finger as a ruler to assess the size of the gland (side to side and top to bottom). With slight pressure, palpate the lateral right side from top to bottom (base to apex), move the finger to the center, which should dip down (median sulcus), and continue to move to the lateral left side, palpating from top to bottom. Normally the seminal vesicles are not palpable. The prostate should be symmetrical, feel smooth, rubbery, and without tenderness. The prostate may be enlarged especially if the male is older. Prior to removing the finger, palpate the rectal wall for nodules and tenderness. This completes the digital rectal examination.

Any stool on the gloved finger should be checked for occult blood. Either the rectum is wiped free of lubricant with a tissue or the tissue is offered to the patient. The patient is allowed to stand up and get dressed.

Conclusion

No matter how long a clinician has been performing a male genital examination, there can be some level of discomfort or anxiety from the clinician, the nurse (male or female), or the patient. Confidence and competence in the physical examination technique takes time to accomplish. There may also be unusual findings on the genitals such as tattoos and/or piercings. The clinician should always remain professional and nonjudgmental. It is important to chart what is seen, what is felt, and what the patient reports.

References


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References


