When a female patient presents to her health care provider with concerns about genital “irritation” or pain associated with sexual sensation, providing comprehensive care necessitates evaluation of the external genitalia in addition to a comprehensive bladder and vaginal evaluation. The purpose of this article is to provide an overview of a baseline vulvar examination, citing common variants of normal and indicators of pathology.

With the woman undressed below the waist and draped for privacy, the lower abdomen and genitalia should be evaluated in a systematic way.

**Systematic Evaluation**

Beginning superiorly, the hair-bearing mons pubis should be inspected for common lesions such as molluscum contagiosum, erythematous folliculitis, external genital warts, or herpetic blisters. A common finding is nonraised, pruritic erythematous skin change consistent with contact dermatitis, an allergic-type response which can occur in response to exposure to chemical additives (such as clothing, pantyhose, creams), perfumes (such as feminine hygiene products, toilet paper, tampons), adhesives (such as minipads), and other irritants such as urine or feces. Contact dermatitis will often self-resolve within 1 to 3 weeks if the irritant is identified and removed. A common mistake is made when well-meaning providers attempt to treat dermatitis by applying a myriad of creams and gels, many of which contain vulvar irritants and alcohol in their bases, prolonging rather than resolving the dermatitis.

Laterally, inspection of the inguinal area is performed, noting erythema, scaling, fissuring, or enlarged lymph nodes. Pruritus and erythema (with or without microfissures) in this area is often a sign of cutaneous candidiasis or tinea (common forms of fungal infection) and can be cultured, and treated topically or systemically. Of note is that these cutaneous “yeast” infections can occur independent of or concurrent with vaginal yeast infections.

**Careful Examination**

The female vulva extends from the mons superiorly to the rectum inferiorly and involves all tissue that is medial to the crural folds. The most common diagnostic mistake in the evaluation of the vulva is the failure to examine each portion of the vulva, from outer most to innermost, moving skin folds from side to side and considering each area. During the examination, a useful patient education strategy is having the patient hold a hand mirror and view the vulva while the examiner names and inspects each part of the vulva, assuring the woman of her normalcy, when appropriate.

The outermost “vaginal lips,” the labia majora, fuse anteriorly at the mons and posteriorly at the perineum. They comprise fully keratinized skin, coarse hair, subcutaneous fatty tissue, and are rich in apocrine and sebaceous glands. As a result, warm environmental conditions, constrictive clothing, or emotional stress can result in the labia majora and adjacent intertriginous areas perspiring profusely. It is important to note that any dermatologic condition that can affect the skin of other parts of the body can affect the skin of the mons and the labia. Lesions, plaques, scaling, excessive pruritus, changes in pigment, or thickening of the keratin layer in this tissue can be indicators of dermopathy and may require a biopsy or referral to a vulvar specialist for further diagnosis.

Medial to the labia majora are the interlabial sulci. The skin thins and there is a disappearance of hair, subcutaneous fat, and a layer of keratin. The labia minora fuse anteriorly to form the clitoral hood and posteriorly to form the introital sulcus. The labia minora contain many sebaceous glands, which can appear as smooth cream-colored papules, pebble-like in their appearance. These are most numerous on the inner aspect and outer edges of the minora. It is common for the oily contents to accumulate under the skin and form small inclusion cysts.
Generally, these will spontaneously abate and reform, and require no medical intervention unless they become symptomatic. Sebaceous secretion accumulation is also common in the interlabial sulci. A thin yellow-white, muco-adherent film is often present in these regions that is commonly mistaken for “vaginal discharge.” This exudate, called *smegma*, is a commonly occurring, protective secretion that typically requires no medical intervention other than patient education regarding its normalcy. Smegma can also accumulate under the clitoral hood. As long as the woman has no complaints of pain, changes in sensation or orgasm, and the clitoral hood can be fully retracted away from the clitoral body upon examination, “smegma extraction” is not warranted.

By conducting a thorough and systematic examination of our patients, diagnosis becomes more accurate and treatment more effective.

About half way along the surface of the medial labia minora, the sebaceous glands cease and the tissue changes from partially keratinized squamous epithelium to mucosa. This histologic line is referred to as *Hart’s line*. The change in appearance from one skin type to another can be of concern to the self-examining patient, who may believe that normal-appearing papillae in this area and in the lower introital sulcus are a sign of genital warts or other lesions. Although all lesions in the vulva deserve thorough inspection, many papillary lesions in this area represent variants of normal rather than pathology. This is particularly true if individual papillae are delicate, singular, nonfused, and/or taller than they are wide (condylomatous papillae tend to be firm, fused, appear in clusters and are wider than they are tall). Of concern in the examination of the labia minora are the appearances of white plaques, “lace-like” striae on pink mucosa, fusion of normally separate tissue areas, microfissures, lesions, or unusual pigment changes.

The vestibule is the inner portion of the vulva extending from Hart’s line on the medial labia minora toward the innermost hymenal ring. Within the vestibule are the urethral meatus as well as several glandular ostia. Lateral to the urethra are the openings to the Skene’s glands (at the 11 and 1 o’clock positions). About halfway down the hymenal ridge inferiorly are openings of the minor vestibular glands (at the 4 and 8 o’clock positions). Within the vestibule are the urethral meatus as well as several glandular ostia. Lateral to the urethra are the openings to the Skene’s glands (at the 11 and 1 o’clock positions). About halfway down the hymenal ridge inferiorly are openings of the minor vestibular glands (at the 4 and 8 o’clock positions).

Vulvar Vestibulitis

Adjacent and inferior to these are the Bartholins or major vestibular ostia (at the 5 and 7 o’clock positions). Some women have additional accessory vestibular glands at the 12 and 6 o’clock positions within the vestibule. Normally the openings to these shallow mucin secreting glands within the vulva are of little import to the woman or to the examiner; however, in a condition called *vulvar vestibulitis*, these glands become marked and chronically inflamed. They become exquisitely sensitive to the soft touch of a cotton swab and often have visible erythematous “halos” around each of the ostia. Vulvar vestibulitis is a leading cause of penetrative dyspareunia, and is highly prevalent. It is reason for referral to a sexual pain or vulvar specialist.

Any visible changes such as scarring, plaques, or fissures in the vestibule can often be exaggerated with the application of a 3% to 5% acetic acid and examination with a colposcope. Biopsies should be performed on any diagnostically questionable area, particularly if VIN (vulvar intraepithelial neoplasia) is suspected, or if the patient has a significant history of HPV and/or abnormal Pap smears.

A final and often neglected area for inspection of the external genitalia is the perineum and the perirectal region. This region comprises full-thickness squamous epithelium, and, like the labia majora, can be affected by any skin condition that can affect skin of the rest of the body. Examples include eczema, seborrhea, psoriasis, lichenoid dermatoses, drug eruptions, rashes from skin or food allergies, or vulvar intraepithelial neoplasia. Careful evaluation for pigment changes, fissures, irritation, and lesions, particularly at the margins of the rectal sphincter, is key.

Although the bimanual vaginal examination is emphasized as the “gold standard for genital evaluation” in many traditional urology and gynecology clinician programs, complaints of pain “down there” often stem from irritation of delicate tissues of the external genital region. By conducting a thorough and systematic examination of our patients, diagnosis becomes more accurate and treatment more effective.

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