

# Genital skin diseases and their expression in sexual functionality

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## Abstract

Sexual functionality acts as an important function of the individual, acting both physically and mentally to create a state of well-being and permitting procreation. A large number of mucosal and cutaneous ailments may affect the genital areas in both males and females, generally leading to local symptoms that impede the sexual act. Genital diseases, sometimes even without impairing the sexual function, may still alter the dynamics just because of the enormous psychological impact that occurs in these situations. We aim to review main dermatological disorders that alter normal function of the genitalia, as well as their physical mechanism by which the sexual functionality is changed.

## Introduction

Sexual functionality is a feature and an important function of the individual both physically and mentally. Genital diseases, sometimes without impairing the sexual function, may still alter the dynamics just because of the enormous psychological impact that occurs in these situations. Below we list dermatological disorders and their physical mechanism by which the sexual functionality is changed.

## Discussion

*Genital skin disorders in men-* In men, there are some common dermatoses located in the coronal sulcus such as:

- Lichen planus - lesions have a bouquet look, sometimes they have an erosive nature and synechiaes especially the erosive coronal sulcus lichen with chronic evolution and strong sexual dysfunction (1-3).
- Bullous dermatoses rarely have this location, except erosive pluriorificial ectodermatoses and also scarring pemphigoid that may cause synechiaes and atrophy in coronal sulcus area (2-4).
- Fixed pigmented erythema caused by numerous drugs ( cyclins , sulfamids etc. ) frequently found on glans under a bullous form (1-4).
- Canker sores located in the coronal sulcus or on the glans, but can also occur on the scrotum or perineum, takes the form of very painful ulcers, round, with a yellow center surrounded by a well defined erythematous edge, sometimes can also take a necrotic look simulating a sancru, healing with scars. In Touraine sores and Behcet disease the scars after multiple relapses can seriously compromise erectile function (1-4).
- Circinate balanitis, often with dried nonerosive or even hypertrophic lesions of Fissinger - Leroy - Riter syndrome, when associated with Chlamydia infections with premeatic localisation can compromise ejaculation and erection.
- Sclero-atrophic lichen an extremely debilitating condition for sexual dynamics in its extended forms (1-4,5,6) .
- Coronal sulcus infections are dominated by STDs. Other balanitis are attributed to infectious agents

where their precise nature is not well proven. The role of traumatic and irritating factors in the induction of these secondary infections should always be taken into consideration: patomimie, urethral catheterization, sexual manoeuvres, poor hygiene, cleaning products or irritative topicals. These are mentioned here because rarely these balanitis can be complicated by penis gangrene or scrotum gangrene that sometimes require surgery with compromised sexual function (1-5).

*Malignant and premalignant diseases:*

- Sclero-atrophic lichen an extremely debilitating condition for sexual dynamics in its extended forms (1-4,5,6) .
- Queyrat erythroplasia presents clinically as erythematous, round-oval red, velvety smooth and well defined plaques. In men it is localized on the glans, on the coronal sulcus, on the inner prepuce. After a latency period of 3-5 years the plaques become indurated with prominent edges, irregular surfaces, which suggest a malignant transformation with an increased tendency for lymph node metastasis. It is invalidating due to surgery, chemotherapy, radiotherapy (2-5,7,8).
- Pseudoepitheliomatous, Keratotic and Micaceous Balanitis described in the elderly, frequently circumcised and those who have presented repeated or sclero-atrophic balanitis appear in the glans and coronal sulcus as dry, keratotic, white, micaceous lesions, with loss of elasticity of the glans, loss of functionality and common developments to coronal sulcus synechiae. The biggest risk is becoming a squamous cell carcinoma (1,3,5,7).
- Giant condyloma acuminatum (also known as a Buschke–Löwenstein tumor) is a verrucos carcinoma of the genital region located either on the glans or on the inner foreskin, rarely on the vulvar region or on the perianal region. Initially, the disease takes the same aspect as a usual viral papilloma but, at some point, it starts taking an infiltrative appearance with an increase in surface and height, resembling a cauliflower vegetal tumor, which sometimes may be ulcerated. This is usually a dry keratosis, it is relapsing and has resistance to treatment, and the only sure cure is penis amputation or wide excision in vulvar and anal locations, a method that usually is refused by the patient because of the high

psychological impact, although sexual function is totally compromised and sometimes even the urination function (1-5).

- Primary Squamous cell carcinoma is rare at this level, most commonly takes the form ulcerovegetant. This is favored by poor hygiene and the subprepuce maceration. Due to treatment, normally surgical (due to frequent inguinal lymph node metastasis), sometimes even with penis amputation penile, the functionality and sexual dynamics are completely compromised (1,3,5,7).

*Other genital tumors:*

- melanoma, rarely found in this region and is usually lentiginous type, is localized almost exclusively on the glans or prepuce.
- Kaposi disease can be located on the penis, especially if associated with AIDS. The aspect is classic with erythematous - angiomatous patches that subsequently become well defined, infiltrated, not painful, with red-purple or brown colour.
- Metastases can be located on the penis, especially prostate neoplasia metastases (1-4).

*Penis-specific skin disorders:*

- Melanosis -brown spots , sometimes very dark, irregular size , with nonhomogeneous color on the coronal sulcul and on glans. The prognosis is excellent with no risk of complications, except psychological one, if the patient is not well informed on the significance of these spots (3,4).
- Zoon plamocitis balanitis, appears as a dark red-brown plate, ofter with shiny and moist surface, sometimes erosive, localized on the dorsal side of the glans, with undefined evolution, but always benign. Circumcision, if accepted by patient, will lead to a quick healing (4,5).
- Sclerosing (plastic) lymphangitis of the penis can have two coexisting aspects, a hard and painless swelling surrounding the coronal sulcus on the entire circumference and a firm slightly painful string beginning in the coronal sulcus and going to the base of the penis. The cause can be traumatic or postinfectious (herpes, gonorrhoea, etc. ). Regression is spontaneous in a few weeks but with complete recovery of functionality.

- This must be differentiated from penile thrombosis, manifested by painful priapism and is the result of trauma or some other general disease (gout, leukemia, etc. ).
- Peyronie's disease is an induration of the corpus cavernosus is usually appearing after the age of 50. It is manifested by the appearance of fibrous nodules progressive medial or lateral, which causes a deflection of the shaft of the penis in erection and painful intercourse (1,2,4,5).

*Genital skin disorders in women.* In women, sexual functionality is compromised later in a disease with genital expression, but in some cases from the onset the disease is debilitating. The deterioration is, in most cases, partial and transitory.

- Genital herpes – caused by herpes simplex type 2, as well as in HSV1 by a much lesser extent. The initial lesion is a bunch of blisters that evolves into a crust on the skin, and into a bunch of erosions on the mucous membranes. In immunocompromised patients relapses can be as debilitating as primal infections and can become chronic, the sexual function is impaired, in this case, more seriously. The differential diagnosis includes other lesions that cause blisters and erosions.
- Disorders expressed through blisters and erosions like: circumscribed lymphangioma, genital herpes, autoimmune bullous diseases, bacterial or viral infections ( impetigo bullous , bullous erysipelas, CMV), fixed pigmented erythema , erythema multiforme, Stevens -Johnson syndrome , thrush isolated or forming part of Behcet's disease or Crohn's disease , self-inflicted injuries, sexually transmitted diseases chancre (syphilis, chancroid , venereal limfогranulomatoza) , erosions and fissures that occur either spontaneously or secondary due to scratching in dermatological disorders (erosive lichen planus, candidosis, lichen sclerosus, , psoriasis) often gives birth to discomfort and itching and burning sensation, temporary , more or less intense. In immunocompromised patients, relapses and primoinfections can be incapacitating (1,2,4,9).
- Bowenoid Papulosis – appears in women over 40 years old, multicentre papules, isolated or united, of different coloration (pink, red, brown) may include the vulva, vagina, urethra. Patients may be asymptomatic or complain of slight itching. The entire anogenital region must be examined, 30% of patients vulvar lesions have carcinoma in situ in other organs. Transformation in invasive carcinoma is

rare (2-4%) and usually occurs in immunocompromised women. In 38% of cases Bowenoid Papulosis spontaneously regress. Supervision of the anogenital area is required over the entire lifetime (2,4).

- It has to be distinguished from Bowen 's disease, usually a single lesion, as a well demarcated brown maculopapular plate, where also symptoms are discreet: itching , burning, sometimes invasive vulvar epidermoid dyspareunia. The disease can remain this way for a long time, however if eratia and infiltration appear it can signal the transformation into squamous cell (1,2,5).
- Paget's disease - is actually a true cancer due to epidermal invasion of cancer cells derived from a intracanalicular breast cancer. It presents itself as a moist erythematous-squamous plaques located on any area with apocrine glands (vulvar, perineal, pubic, axillary, umbilical). Characteristic is spreading in “oil slick” style (4,5).
- Invasive vulvar epidermoid carcinoma - appears in older women, as an eroded nodule or a bouquet plaque, endured and ulcerous, d'emblee on dystrophic lesions (old and untreated sclera lichen). Itching and especially vulvar pain are important. Treatment consists in bilateral inguinal adenectomy vulvectomy which in fact totally compromises the sexual functionality (1,4,5).
- Dermatoses (planus lichen, sclerosus lichen, erosive vaginitis scaling lichen). Appearance varies according to location: itchy purple papules at pubis and labia majora level , leucokeratoza network , papules , or plaques with whitish streaks at labia minora level, painful erythema accompanied by bleeding if it affects the vestibular and vaginal mucosa. Evolution is slow but debilitating, with the advent of interlabial synechiae or vaginal atrophy, and installing a lichen sclerosis. The choice of treatment and its effectiveness depends on the type of lichen. It ranges from therapeutic abstinence to local corticosteroids. Surgery is reserved for chronic and relapsing forms of the disease. Sometimes psychological support is also needed (1-4).
- Vulvar psoriasis located on vulva and labia majora with lesions that are erythematous, covered by whitish, thickened scaly, with clear limits. In the folds (interlabial, inter gluteal, groin) and in the macerated areas (labia minora) there is no scaly, lesions are erythematous, smooth, often with cracks

and with appearance resembling a candidal intertrigo. Local itching and dyspareunia are present depending on the extent of lesions. (1-5).

- Allergic contact dermatitis - most frequent allergens for vulvar localisation are: drugs, cosmetics, perfumes, local anaesthetics and nickel. Clinical appearance of the lesions depends on the aggressiveness of the product: erythematous plaques, blisters, bubbles, erosions or ulcers. Local sensation and appearance of the lesions are similar to those in irritant dermatitis and atopy. Till solving the cause the itching, burning sensation remain chronic (5).
- Zoon's vulvitis, one or more dark red plaques with shiny surface with small brown patches called "grains of pepper". The condition is benign and it progresses slowly. Aetiology is unknown, without specific treatment, with itching or burning and dyspareunia when it's symptomatic, this disorder can be disabling (2,4,5,10).
- Vulvodynia, defined by chronic vulvar discomfort with burning, pinching or irritation it needs multidisciplinary consults to establish aetiology. Two aspects of this definition are important: burning and chronicity. Burning sensation must be distinguished from itching. The two different pathologies translated, respond to different treatments (especially antihistamines are not effective in vulvodynia). Regarding chronicity, pain usually appears after a gynaecological surgery (hysterectomy or warts cauterisation) or not (psychic shock) and it amplifies over time, eventually making sexual activity impossible. Pain is exacerbated while walking, if wearing pants too tight or by using vaginal swabs. Vulvodynia essentialis and vaginismus are two entities described in anatomoclinical literature as being responsible for vulvodynia (2-4).

## **Conclusions**

Numerous medical conditions affect the skin and mucous membranes of both male and female genitalia; most of them lead to sexual dysfunction/impairment. Knowledge regarding the differential diagnosis for these disorders is essential to the clinician. Further medical research is needed to improve

the outcome in genital skin disorders, in order to improve the quality of life, including the sexual activity, of the patient.

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