Cutaneous Manifestations of Venereal Disease

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There has been a dramatic increase in the incidence of venereal disease, and these disorders have become one of our major national health problems. It is obvious that if this chain of infection is to be broken, individuals with these diseases must be treated as early as possible in the course of the infection before there is a chance for it to spread to others. We have been implored to help find the sexual contacts of these individuals, and it is essential that we use the excellent epidemiological investigators of our health departments for this purpose.

From the physician's viewpoint, it is particularly important to recognize these disorders early and treat them as soon as possible, and in order to do this we need to recognize the lesions we see. Many of these disorders have their first manifestations on the skin and mucous membranes, and our purpose is to present a somewhat panoramic view of the many and varied types of skin lesions that may lead to the diagnosis of one of these disorders.

The first part of this discussion will deal with gonorrhea because it is the most common of venereal diseases. It not only has the highest incidence among venereal diseases, but it has also become one of the most common of all infectious diseases. There were at least two and a half million cases in the United States last year.[1] The disorder usually begins with genital infection and in the male is a relatively simple problem. There is urethral discharge, marked dysuria, and the patient is so uncomfortable that he rapidly presents for treatment. Most of the time he even tells you what he has. Diagnosis under these circumstances is not difficult.

The problem is the female who is asymptomatic in many instances.[2] She has only mild vulvovaginitis or cervicitis, and she has very little in the way of symptoms. It is obvious that she will not be treated unless the physician makes sure that she is through his treatment of her male contact who presents with symptoms. Internal involvement may occur with this disorder in the form of progression of the organism to the internal genitalia resulting in salpingitis. Sometimes this may lead to pelvic inflammatory disease and sterility.

There are very few lesions on the skin and mucous membranes. Rarely, there will be localized cutaneous lesions in and around the genitalia. These may involve the lower abdomen, the upper medial thighs, and the genitalia themselves, and may take the form of pyoderma-like infections. These lesions may appear as folliculitis or abcesses.

About 1% or 2% of individuals with gonorrhea, if left untreated, will develop generalized cutaneous gonorrhea.[3] These lesions usually begin as erythematous macules and progress to papules or vesiculopustules (Fig 1). They most frequently are located on the distal extremities and sometimes take on a hemorrhagic appearance. Organisms reach this destination apparently by hematogenous spread, and these lesions are commonly associated with fever and arthralgia. The arthritic involvement most frequently occurs in the large joints, particularly the knees, wrists, and ankles. The typical hemorrhagic papules on the distal extremities though few in number should be enough to suggest this diagnosis without any of the other findings, but if they are accompanied by fever

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and arthritis, the diagnosis is almost certain, and it is basically a clinical one. Unfortunately, Neisseria gonorrhea usually cannot be cultured from the cutaneous lesions, but frequently can be identified by means of fluorescent staining techniques.[4] Therefore, we have to depend on the clinical combination of these three manifestations, and sometimes a culture can be obtained from the cervix of the female.

While gonorrhea actually has very little in the way of findings on the skin, syphilis probably has the most varied number of cutaneous lesions of any infectious disease. The primary phase has an incubation period which averages about three to six weeks, but may stretch all the way from ten to ninety days. The first sign is an indurated papule which soon becomes eroded and leaves an ulcer. Most patients will have regional lymphadenopathy or so-called satellite buboes. In the male, most of these lesions are located on the penis, frequently on the glans or on the area of the coronal sulcus. They have a clean base, slightly rolled edge, and are firmly indurated if palpated with the gloved hand of the examiner. Typical lesions in this area are readily suspected. Most of us would immediately think of primary syphilis. On the other hand, the primary lesion in the female is most frequently on the cervix, and if it is not suspected and an examination with a vaginal speculum is not done, it will be missed.[5] In addition, the lesion may appear as almost any nonspecific type of erosion. The second most common location of lesions in the female is on the external genitalia.

Another problem is the increasing incidence of extragenital primary lesions. These do not occur on the genitalia, but may occur anywhere on the anatomy. They are frequent in the perianal region, and this is particularly true in our ever-increasing homo-

Fig 1—Hemorrhagic vesicopustules of generalized cutaneous gonorrhea.

sexual population.[5] These lesions may appear as almost any nonspecific erosion of the anal area, appearing to be an anal fissure or erosion. Another common extragenital location is the perioral region including the mouth, pharynx, lips, and tongue. Again, because of the location, many would never suspect the diagnosis of even a classical lesion. Extragenital lesions can occur in rare locations such as fingers where they are sometimes seen in medical, dental, and paramedical personnel.

Secondary syphilis is by far the most varied cutaneous phase. The incubation period is a great deal longer, and the patient is not as suspicious of any contacts he may have had because the average incubation from the time of infection to the beginning of the secondary phase is somewhere around two to three months and may be as long as six months. There are sixteen different types of cutaneous lesions listed in Table I, and the main point to emphasize is that almost any type of cutaneous lesion can occur in the secondary phase of syphilis. The one major exception to this rule is that in adult secondary syphilis vesicles and bullae rarely, if ever, occur.[6]

Some types of lesions are more characteristic than others. Annular lesions, split papules, palmar and plantar lesions, alopecia, mucous patches, and condylomata lata fall into this category.

The patient in Figure 2 has an erythematous macular, morbilliform type of eruption which could easily be mistaken for a drug eruption or any viral exanthem. A VDRL was reactive at 1:128. Lesions on the palms and soles are probably the hallmark of secondary syphilis. These lesions may take any form: macules, papules, pustules, and even an exfoliative process may be seen. Most of them are hyperpigmented macules with an overlying fine white scale, but they may be much more impressive with pustules leading almost to exfoliation. If one sees a patient with lesions on the palms and soles that are symmetrical and are not vesicular or bullous, this diagnosis should at least come to mind.

Alopecia is usually described as being patchy in nature or, classically, as being moth-eaten in appearance.[5] Once again, almost any patchy type of alopecia should be suspected. There are some exceptions to this rule, and probably the most common type of patchy alopecia is alopecia areata. However, without a ready explanation or diagnosis such as alopecia areata, the physician should consider secondary lues.

Condylomata lata begin with flat-topped papules which coalesce to form masses, usually in intertriginous areas particularly around the genitalia and in the perianal region. These lesions are flat-topped and this appearance helps to differentiate them from the pointed lesions of condylomata accuminata or venereal warts which may occur in the same area. Condylomata lata may become quite massive and be surrounded by marked hyperemia, and if a dark field is done from these lesions, it is readily positive because they are moist and usually teem with spirochetes.

TABLE I
Cutaneous Lesions of Secondary Syphilis

Annular	Maculopapular
Split papules	Pustular
Palmar and plantar	Follicular
Alopecia	Squamous
Mucous patches	Pigmented
Condylomata lata	Nodular
Macular	Rupial
Papular	Ulcerative

Annular lesions are among the most characteristic type for this phase of syphilis. These are lesions with an active advancing border and a healed center. They may occur in other disorders such as sarcoidosis or granuloma annulare, but once again, if they are seen, secondary syphilis should be included in the differential diagnosis. Split papules may occur at any crevice such as along the corner of the nose, behind an ear, or at the corners of the mouth where they may be difficult to separate from perlèche. Mucous patches are white stuck-on-appearing lesions that may occur on any mucous membrane such as the cervix or oral area. Sometimes these lesions are difficult to differentiate from lichen planus, moniliasis, and even leukoplakia.

Because of its varied forms of presentation, secondary syphilis is often confused with several other disorders. Pityriasis rosea is one of the most difficult to separate from secondary lues. A patient who does not have the classical herald patch and the classical Christmas tree distribution of pityriasis rosea, is suspect. The palms and soles should be examined and if they are clear, the patient probably does not have syphilis, but the physician should be thinking about the possibility and a serologic test should be done.[7]

Having talked about the so-called major venereal diseases because they have the highest incidence, I would like to turn the discussion to those that are sometimes considered minor, but are certainly not

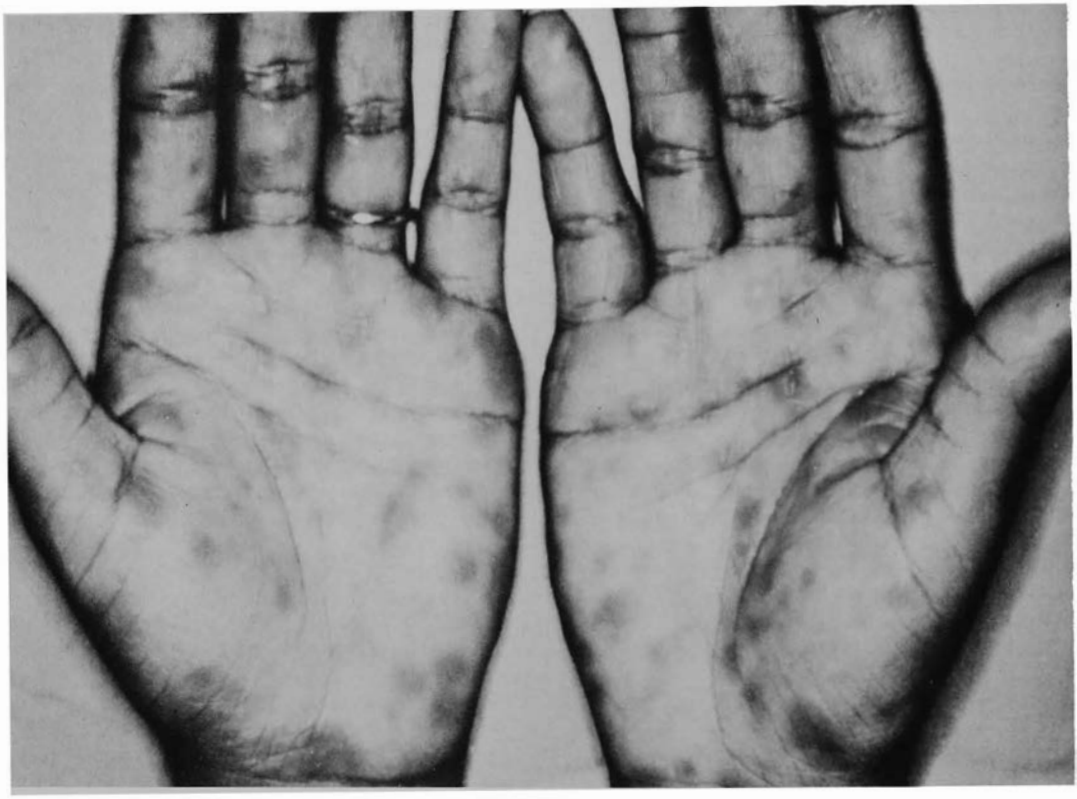

Fig 2—Palmar and plantar lesions are extremely suggestive of secondary syphilis.

minor to persons who have them. Chancroid has the so-called soft chancre, as opposed to the hard chancre of syphilis, because it is not usually indurated. The lesions are multiple and extremely tender and all of these characteristics help clinically to separate it from syphilis. The lesions are usually located on the genitalia, and most of these patients will have inguinal adenopathy. The ulcers frequently have a dirty, necrotic, shaggy base. They are extremely tender and because there is so much necrosis they may emit a foul odor. Often it is difficult to differentiate this disorder from syphilis, and unfortunately the available laboratory tests for chancroid are not satisfactory. Occasional patients will have fairly clean-based lesions unlike the typical lesions of chancroid, but if these lesions are multiple, there is less chance of primary syphilis which usually is solitary. Tenderness also suggests chancroid, but one cannot be sure without ruling out syphilis by means of a negative dark field examination and negative serologic tests. If these are not done, the clinical diagnosis of chancroid cannot be made.[4]

Next, are two disorders which are frequently confused because their names are similar: lymphogranuloma venereum and granuloma inguinale. They really are not very much alike except that they occur on or around the genitalia. Both are considered to be venereal in nature. In lymphogranuloma venereum, the primary lesion is a papule or erosion of brief duration and is not very impressive. Most physicians have never seen one and probably never will because it is small and often overlooked by the patient. Soon after the primary phase in the male, large, tender lymph nodes appear. These are referred to as buboes. In the female, lymphatic drainage is partially to the perianal area, and therefore proctitis may occur as well as resultant stricture. The lymph nodes are usually large, fluctuant, and tender. They may be unila-

teral or bilateral, and both the inguinal and femoral nodes may be involved.

Granuloma inguinale, on the other hand, does not primarily involve the lymphatics. It is basically a disease of large slowly growing ulcers which have a beefy red appearance,[8] and there is not usually lymphatic involvement unless secondary bacterial infection with other organisms supervenes. These lesions may be markedly destructive. The beefy red, granulomatous appearance is typical as is partial destruction of the genitalia.

It should be noted that occasionally individuals with one venereal disease may have another. It is not rare to see a patient with gonorrhea and syphilis at the same time, and any combination of these disorders is a possibility. Consequently, appropriate investigation should be done to rule out such simultaneous occurrences.

Finally, there is another problem which is increasing rapidly in numbers of cases. This problem is genital infections with herpesvirus. This is almost always with herpesvirus type 2, although occasionally type 1 will become involved.[9] The lesions most frequently are vesicular and they quickly erode to leave shallow ulcerations which are usually somewhat tender. These will resolve in a period of a couple of weeks in most instances. The diagnosis is basically clinical and the physician usually is able to tell what it is by simple examination. However, if there is doubt, other venereal diseases must be ruled out. A culture can be done for the virus, and a Tzanck prep may be very helpful.

The lesions in the primary phase of infection around the genitalia are numerous. They may involve the whole area from the genitalia to the perianal region. There frequently is some fever and generalized illness with malaise, some edema, and sometimes a purulent discharge which occasionally is mistaken for gonorrhea. However, this is not the phase that is usually seen. Usually localized clusters of vesicles occur over and over in the same location, and if this history is available, it is easy to make the diagnosis. However, even more frequently the vesicles have already eroded by the time the patient presents in the physician's office, and only simple small erosions are seen. Then the physician has to depend on the history that vesicles have occurred previously.

One final point: there has been an increasing amount of evidence in recent years that there may be some relationship between carcinoma of the cervix and herpesvirus type 2. This was initially discovered by cytological exams of individuals who had both premalignant and malignant lesions of the cervix. These exams were noted to have the cytological appearance typical of herpes infections, and there is also an increased number of these patients who have more antibodies to herpesvirus type 2 than do control groups.[9] The significance of these findings is not clear, but some workers now feel that at least women with this type of infection should have more frequent pap smears, maybe one every six months.

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