CHAPTER XVIII.

GONORRHŒA IN WOMEN.

THE mucous membrane of the genital organs is far more extensive in the female than in the male. Besides lining the urinary canal and the vulva—parts corresponding to the urethra and balano-preputial fold in man—it is continued over the walls of the vagina, where its surface is increased by numerous folds, and, reflected over the os tincæ, extends into the cavities of the cervix and body of the uterus. Any portion of this extensive surface may be attacked by catarrhal inflammation, which, according to its seat, is called gonorrhœa of the vulva, urethra, vagina, or uterus. Some of these parts are more frequently affected than others. Thus, gonorrhœa of the vagina is more common than that of the urethra or vulva, and gonorrhœa of the uterus is the least frequent of all. Zeissl states that, according to his observations, only about 5 cases of urethritis are met with to 100 cases of vaginitis. It is rare for all the different portions of the female genital organs to be attacked together, though two or more are, in many instances, combined as the seat of gonorrhœal inflammation. The manner of union appears to be chiefly determined by the anatomical relation of the parts. Thus, when the vulva is affected, the urethra and lower portion of the vagina are likely to be involved; while on the other hand, the upper part of the vagina and uterus are not infrequently implicated together.

CAUSES.—Gonorrhœa is a much less common disease in women than in men. This may be accounted for by several reasons. The mucous membrane of the vagina is less sensitive than that of the male urethra; it receives no little protection from the sebaceous and mucous secretions which constantly cover it; the size of the passage is such that it can be readily cleansed; and the urethra, in consequence of its being but very slightly concerned in the sexual act, and of the situation of its meatus, is less exposed to contagion. But another reason, and one perhaps of still greater weight, is to be found in the absence in men of those chronic discharges of simple origin, the presence of which in women is so fruitful a cause of urethritis in the opposite sex. When speaking of the causes of gonorrhœa in the male, I endeavored to show that it is frequently due to the irritation produced by a leucorrhœal discharge, by the menstrual flow, or by the normal secretions of the female genital organs. Women, in sexual intercourse, are not exposed to these exciting causes of gonorrhœa. In a condition of health, there is no secretion about the male genital organs capable of exciting inflammation in the female; while during the acute stage of gonorrhœa the pain excited by turgescence

of the penis is generally sufficient to deter from coitus, and even in cases of gleet, the amount of the discharge is so small, the urethra so frequently cleansed by the passage of urine, and the vagina so well protected by sebaceous matter, that intercourse may often take place without much exposure to the woman. Owing to these circumstances, women more frequently communicate than receive gonorrhœa.

It would seem to be a fair deduction from the foregoing, that, taking a given number of gonorrhœal cases in the two sexes, more are due to infection in women than in men; and such, I think, is unquestionably the fact. But, while assigning to direct contagion the first place in the etiology of the gonorrhœa of women, other influences must not be overlooked. These, however, are less appreciable in the female than in the male. The history of women seeking advice for gonorrhœa can rarely be ascertained with certainty, or their disease traced with accuracy to its source. It is notorious that a woman often receives the embraces of several men within a short space of time, and there are many reasons for her concealing important facts which a man would readily confide to his physician. It is, therefore, only under peculiar circumstances that we can satisfactorily ascertain the origin of gonorrhœa in women; still, opportunities for such investigation do sometimes occur, and in several which I have met with, it was evident that the disease was due to other causes than contagion. Thus, I have known intercourse with a healthy man to excite an extensive inflammation of the genital organs in women suffering from leucorrhœa and congestion of the cervix, especially if the stimulus of liquor was added to that of coitus. In such cases, chronic may readily be transformed into acute inflammation, in the same way as a gleet in man may be changed into a clap. In some instances, I have had reason to believe that the frequent repetition of the sexual act has produced gonorrhœa in women free from any previous disease, and it is a well-established fact that a purulent discharge sometimes follows the first exercise of marital rights, although there may have been no laceration of the female genital organs. The use of pessaries is also sometimes the cause of vaginitis, which has again been attributed to working on a sewing machine. In general, the causes of gonorrhœa in women, independent of contagion, may be enumerated as follows: Immoderate sexual intercourse, violence, masturbation, the presence of vegetations, syphilitic or other eruptions, errors of diet, ascarides in the rectum, and the external influences of cold, moisture, etc.

Certain conditions of the constitution at large, as chlorosis and scrofula, play an important part in the causation or maintenance (when first excited by other causes) of gonorrhœa in women, far more so, indeed, than they do in men.

Many women have, during pregnancy, a muco-purulent discharge, which usually makes its appearance after the fourth or fifth month, though sometimes before, and chiefly affects the upper portion of the vagina. An examination of the vaginal mucous membrane reveals

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the existence of numerous granulations, similar to those observed also in some cases of vaginitis from contagion. Cazeaux states that this discharge may produce disorder of the digestive functions, as shown by the coexistence of gastralgia, which is more or less severe according to the intensity of the vaginitis.[1] The discharge usually disappears spontaneously after the termination of gestation.

Vaginitis may be attendant upon *scarlet fever*, or it may follow this and other exanthemata as a sequela.[2]

Very *young girls* may be attacked with inflammation of the genital organs, producing a copious purulent discharge from the vulva, and sometimes from the vagina also, the cause of which has often been misapprehended. It has been supposed that the disease was contracted from men who had been seen to caress or fondle them, and innocent persons have been arrested and tried on this charge. No one in such cases has done more for the honor of our profession and for the cause of humanity than the late Mr. Wilde, of Dublin, who repeatedly came forward when the accused party was about to be convicted for an offence which he never committed, showed the groundlessness of the charge, and proved his innocence. In most cases the discharges in question are no more venereal in their nature than the otorrhœa which is so common in children. Their predisposing cause is general cachexia, or, as it is commonly called, a strumous diathesis. The exciting cause may be deficient cleanliness, derangement of the digestive functions, the irritation of teething, and the presence of ascarides in the rectum, or within the vulva, where they may have found their way from the gut. Such discharges are contagious when applied to the ocular conjunctiva, and not less so, in all probability, if brought into contact with the genital organs of a second person; thereby proving that the contagiousness of gonorrhœal matter depends upon the seat of the disease, and not upon the presence of a specific poison necessarily transmitted from one individual to another.

Symptoms.—The initiatory symptoms of gonorrhœa in women are often obscured, in the rare instances afforded for their examination, by the previous existence of a leucorrhœal discharge. They do not differ from the early symptoms of inflammation of other mucous membranes, and consist in the gradual development of swelling, redness and tenderness, and an increase of, and change in, the secretion of the part. The discharge varies in consistency and color as in gonorrhœa in the male. It is at first transparent and mucous, then muco-purulent, and finally, when the disease has attained its height, thoroughly purulent. When secreted by the vagina, it is acid, fluent, creamy, and readily removed from the surface; when derived from the cavity of the cervix,[3] without being mixed with the acid matter

[1] Traité de l'art des accouchements, 4e édition, p. 317.

[2] Cormack, London Journal of Medicine, September, 1850, p. 872: and Barnes, Medical Gazette, July 12, 1850, p. 65.

[3] The most convenient method of collecting the cervical secretion for the purposes of examination, unmixed with the vaginal mucus, is by means of Lallemand's porte-caustique, uncharged.

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of the vagina, it is alkaline, nearly transparent, tenacious like the white of egg, and very adhesive. Examined under the microscope, the vaginal secretion is found to consist of pus-corpuscles, mucus, an abundance of epithelial scales, and flakes of epithelium in masses; while the viscid plug drawn from the cervix, which, as shown by Dr. Tyler Smith, is glandular in its structure, exhibits mucus-corpuscles, oil-globules, and purulent matter. The consistency and yellowish color of the vaginal secretions are dependent upon the quantity of organized elements it contains. The thicker it is, the more opaque, and the more resemblance it bears to cream or pus, the greater the quantity of pavement epithelium and pus-globules, as shown by the microscope.[1]

M. Donné has also called attention to the presence of a small infusorial animalcule, which he at first supposed to be pathognomonic of gonorrhœal vaginitis. He has since renounced this opinion, but still asserts that the *Trichomona* is not seen in healthy vaginal mucus, but only where there is a large admixture of pus-globules. Farther researches by Kölliker and Scanzoni[2] would show that it is never present in the secretion of the cervix, so that it cannot be a mere cell of ciliary epithelium, and these authors state that there can be no doubt of its independent animal nature. It was first found by them in pregnant women, and, after their attention was called to it, in more than half the women whom they examined. Hence it cannot be considered as characteristic of gonorrhœa. Still, it is never met with in perfectly healthy mucus, destitute of pus-globules. It appears to depend upon certain changes in the vaginal secretion, and is not developed to any extent except in mucus which is clearly abnormal.[3]

Traces of a discharge from the genital organs are to be sought for chiefly upon the posterior portion of a woman's linen, and not upon the anterior. The absence of any external evidence of disease does not, however, prove her sound, since the upper portion of the vagina may be inflamed and the secretion be retained within the vulva. The symptoms of gonorrhœa in women vary according to the part affected, and it is convenient to make a corresponding division in their description, recollecting, at the same time, that the different forms may be more or less combined in a given case.

Gonorrhœa of the vulva is less common than that of the vagina, and, in many cases, is secondary to the latter, being produced by contact with the discharge flowing from above. It is, however, often primary, and is that form which is commonly met with as a result of violence, or the presence of vegetations and syphilitic or other eruptions, as venereal ulcers, mucous patches, etc. The gonorrhœa of young girls, already referred to, is also, in most cases, vulvar.

[1] Pathology and Treatment of Leucorrhœa, Phil. ed., 1855, p. 122.

[2] Das Secret d. Schleimhaut d. Vagina und des Cervix Uteri. Scanzoni's Beiträge, Bd. ii., p. 128. Wurzburg, 1855.

[3] Traité pratique des maladies des organes sexuelles de la femme, par F. W. de Scanzoni; traduit de l'Allemand, Paris, 1858, p. 452.

The patient's attention is early attracted to the part by a sensation of heat and pruritus. On examination, the mucous membrane is found to be reddened, tumefied, and more moist than natural. As the disease advances the discharge increases in quantity and becomes muco-purulent, or purulent, and very offensive. The labia and nymphæ may be swollen to such a degree as to render it almost impossible to expose the orifice of the vagina. If the nymphæ be naturally large, they may swell to such an extent as to protrude beyond the labia and become constricted; a condition which may be compared to paraphimosis. The mucous membrane may be deprived of its epithelium in patches, identical in character with the superficial excoriations of balanitis. The inflamed parts are exceedingly sensitive to the slightest touch or pressure, and motion is very painful. The last drops of urine fall upon the excoriated surface and give rise to severe scalding. The discharge collects in the hair on the mons veneris and upon the external surface of the labia, and flows upon the integument of the perinæum, and upon the upper portions of the thighs. Wherever it remains for any length of time it irritates and inflames the skin, which soon assumes an erythematous or even excoriated condition, and itself secretes an acrid humor. If the discharge comes in contact with the anus, as is very likely to occur when the patient lies upon the back, it may produce irritation of the rectum, attended with frequent desire to go to stool, pain on the passage of the fæces, and sometimes slight diarrhœa.[1]

The sexual desires are often heightened, and amount at times to nymphomania, but coitus is attended with severe pain, if it even be possible. No other form of gonorrhœa in women equals this in the suffering which it occasions. This is partly owing to circumstances already mentioned, and partly also to the great sensibility possessed by the vulva in common with other outlets of mucous canals. The general system sometimes sympathizes with the local disease, and the patient is found to be hot and feverish. All cases of vulvar gonorrhœa are not, however, so severe as that just described. Instances occur in which there is but little redness, tumefaction, or sensibility, and merely an increase of mucous secretion of the part; and the symptoms may vary all the way from this mild character to the intensity of the above description.

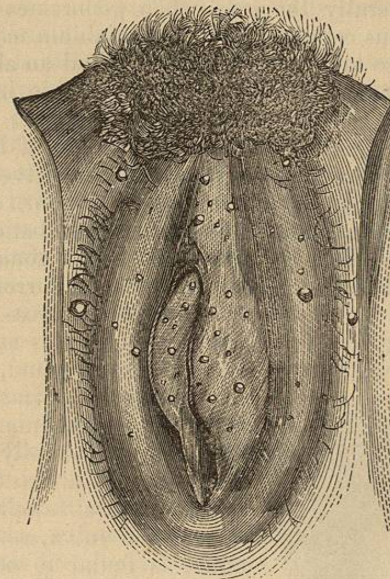
The anatomy and pathology of the glandular apparatus of the female genital organs have been admirably given by M. Huguier.[2] The vulva is abundantly supplied with sebaceous and muciparous follicles, which are lined by a prolongation of the mucous membrane. Travelling along this continuous surface the inflammation readily gains access to the interior of the follicles, which soon pour out a thick purulent secretion from their mouths. The follicles project from the surface of the mucous membrane, in the form of numerous small prominences with ulcerated tips, from which the

[1] Baumés, Précis sur les maladies vénériennes, t. ii., p. 163.
[2] Mémoires de l'Académie de méd., 1850, p. 529.

matter escapes. This is the "sebaceous or follicular vulvitis," so called by French authors.

The entrance to the vagina is also provided with two larger and more deeply situated secretory organs, which, although noticed by several anatomists subsequent to the seventeenth century, were comparatively unknown up to quite a recent date. These glands were first discovered by Duverney in the cow, and afterwards by Bartholin

Fig. 43.



Sebaceous vulvitis. (Huguier.)

in women, but, having been sought for in vain by Haller, they were entirely forgotten, until attention was again called to them, in 1840, by Tiedemann,[1] of Heidelberg, and by M. Huguier, of Paris, in 1850. They are now known by the name of Duverney's, Bartholin's, Cowper's, or the vulvo-vaginal glands. In a few rare cases they are said to be wanting. They are situated, one on either side of the entrance to the vagina, in the triangular space, bounded by the ascending ramus of the ischium, the vaginal orifice, and the transversalis perinæi muscle, and are covered by the superficial perineal fascia, and some fibres of the constrictor vaginæ. Their size varies in different subjects, and they appear to be largest in women addicted to sexual intercourse. When most developed their diameter usually measures about six-tenths of an inch. They are conglomerate glands, consisting of congeries of small tubes, surrounded by a common en-

[1] Von den Duverneyschen Drüsen; Heidelberg, 1840.

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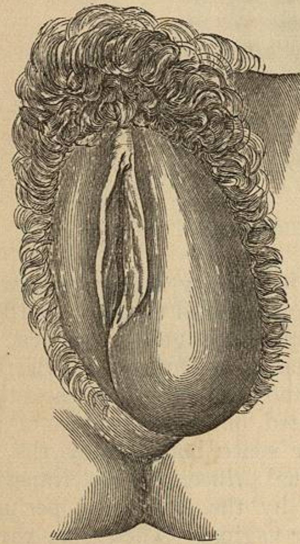
velope, and, during the act of coitus, pour out a copious secretion of albuminous fluid, by means of a duct six or seven lines in length, opening just in front of the hymen, or near the lateral and posterior carunculæ myrtiformes, which often conceal the orifice.

The inflammatory process may invade this duct and the gland beyond it, in the same manner that it does the superficial follicles; and when suppuration has taken place, if the matter do not find free exit through the natural outlet of the gland, an abscess is formed either within the dilated duct, or in the substance of the gland itself; the former being generally the case when gonorrhœa is the exciting cause. The copious cellular tissue of the labium major surrounding the gland may also take on inflammation, and an abscess form both within and without the gland, as we see occur in inflammatory buboes in the groin.

A frequent and peculiar feature of abscesses of this gland is the facility with which, having once emptied themselves, they again fill up on the occurrence of any slight cause, as a return of the menstrual period, indulgence in sexual intercourse, exacerbation of the vulvar inflammation, etc. This circumstance has led some authors to the erroneous conclusion that these abscesses are surrounded by a true cystic wall, whereas their envelope continues to be, as at first, either the dilated duct or gland, which, to a certain extent, performs the office of a cyst. These glandular abscesses, however, may generally be recognized without much difficulty. The patient complains of a "swelling" in the vicinity of the vulva, which, on examination, is found to occupy the lower third of the labium, and borders upon the posterior commissure. The affected side is more prominent than its opposite, and the labium is pear-shaped, with its broader extremity directed backwards and inwards towards the median line; the integument on its external aspect preserves its normal color, and is free and movable, while the internal surface of mucous membrane is red and adherent to the tumor. The part is exceedingly sensitive to the touch, and the patient can neither walk, stand, or sit, without difficulty, owing to the pain excited by the slightest pressure. The contents of the tumor are occasionally discharged through the normal duct of the gland, but usually, unless art intervene, the abscess bursts in the neighborhood of the glandular orifice, and very rarely

Fig. 44.



Inflammation of the vulvo-vaginal gland.

on the external or integumental surface of the labium. M. Huguier contradicts the statement made by Vidal and other authors, that a recto-vaginal fistula is liable to form. This never occurs, according to the first-named surgeon, if the rectum be in a sound condition. The frequent recurrence of abscesses of the vulvo-vaginal gland, or duct, is a source of great annoyance to women of the town, when suffering from chronic inflammation of the vulva.

Inflammation of Bartholin's gland may be caused by onanism in women who have never been entered, and also by syphilitic lesions in the neighborhood, although it is generally due to extension of the inflammation of vaginitis or vulvitis.

Dr. Salmon[1] has called attention to certain cases of gonorrhœa, in which the vulvo-vaginal gland and duct are alone affected, the remainder of the genito-urinary organs retaining their normal condition. According to this surgeon, the affection is quite common, and especially so among young prostitutes, in whom it would seem to be due to the irritation of coitus upon parts as yet tender. The patient experiences no pain or inconvenience, and an examination, such as is ordinarily made, might lead to the conclusion that the genital organs are sound; but if the labium, on one or both sides, be firmly pressed against the ramus of the ischium, the gland, which is not perceptible to the touch in a state of health, may be felt as a moderately firm tumor, and its muco-puriform contents escape from the orifice of the duct.

Some women of the town are said to learn the trick of performing this little manœuvre before being examined by a surgeon, so as to conceal their disease. This may also explain some instances in which two men have connection with the same woman in rapid succession, and the first catches a clap but the second escapes. The first, by his pressure, evacuates the abscess and pays the penalty, while the other goes free (Zeissl). Dr. Salmon expresses the opinion that many cases of gonorrhœa in the male, following intercourse with women apparently healthy, are due simply to the puriform secretion furnished by this gland. Dr. Le Pileur has reported a very interesting and carefully observed case, in which a physician contracted a severe clap from a woman in whom no disease could be found except an abscess of the vulvo-vaginal gland.[2]

Vaginitis is more common than any other form of gonorrhœa in women. The whole extent, or only a portion of this passage may be inflamed. The lower part is more or less implicated in most cases of vulvitis, while frequently the upper part is alone involved, and the woman might be supposed free from disease if not examined with the speculum; especially as, from the comparative insensibility of the upper portion of the vagina, her sensations are an unreliable index of its condition. Ricord states that the posterior wall of the

[1] Med. Times and Gaz., Dec. 23d, 1854, p. 646, quoted from Union Médicale.—Braithwaite's Retrospect, part 31, p. 208.

[2] Ann. de Derm. et Syph., Paris, t. 9, 1878, no. 5, p. 374.

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