stationary period, repair begins by a change in color of the sore, which becomes more rosy, the induration often simultaneously commencing to abate. Thicker pus forms on the ulcer, and it goes on to cicatrization from the edges. The poison of the secretion remains to the end.

COMPLICATIONS.

The complications of syphilitic chancre are: (*a*) vegetations; (*b*) inflammation; (*c*) chancroid (mixed chancre); (*d*) transformation into mucous patch; (*e*) phagedena and gangrene; (*f*) syphilitic bubo, which is indeed not a complication, but a necessary accompaniment of syphilitic chancre; (*g*) lymphitis.

(*a.*) VEGETATIONS.—Warty growths are liable to spring up around syphilitic chancre of the prepuce or anus, as they are with other forms of irritative disease (chancroid, balanitis, gonorrhœa, p. 21). These are rare and purely accidental. Syphilis as a poison has nothing to do with their production.

(*b.*) INFLAMMATION may complicate syphilitic chancre, from position, mechanical or chemical irritation, etc., occasioning pain, and a more purulent discharge, which latter may be auto-inoculable, producing an abortive pustule, or a small, transient ulcer, and liable to lead to the further complication of suppurating bubo.

(*c.*) CHANCROID may complicate syphilitic chancre, the two sores existing together side by side, each with its own peculiar characters, or the same spot may have been simultaneously or successively inoculated by the two poisons, giving rise to what is known as "mixed chancre," a sore which possesses the characters and qualities of both of these lesions. The two poisons are distinct, and run their own course, each unmodified by the other, but, if both develop upon the same spot, the character of the lesion is altered, and it becomes a *mixed sore*. When a syphilitic chancre is inoculated with chancroid pus, the ulceration rapidly deepens and progresses, putting on all the characters of chancroid; but the syphilitic induration remains. On the other hand, when a chancroid is inoculated with syphilitic virus the ulcer is unmodified, but, after a proper incubation, syphilitic induration sets in. These facts, which have been proved experimentally, have been also verified clinically by confrontation. If a given abrasion be inoculated with both poisons in sexual intercourse, the chancroid develops first, and, for a time, nothing but a chancroid exists, furnishing auto-inoculable and hetero-inoculable pus producing chancroid only, and not syphilis. After a certain variable incubation, however, the soft sore indurates spontaneously, and then the chancre is mixed, capable of imparting chancroid alone by contact, since the chancroid poison is more virulent, more contagious, than the syphilitic; or mixed chancre, followed by general syphilis. Finally, if the period of incubation of the syphilitic virus happens to be very long, the chancroid may get well, or be cured by cauterization, but in due time

the syphilitic chancre appears upon the same spot, and then hetero-inoculation will produce only the syphilitic chancre, with its inevitable accompaniment, general syphilis. The literature of experimental syphilis furnishes some very striking examples of mixed chancre. The following two are particularly instructive:

Melchior Robert[1] inoculated a student with the secretion of a mixed chancre. A classical chancroid followed, the pus of which proved auto-inoculable. After the ulcer, the result of inoculation with the mixed poison, had nearly healed, induration set in, the sore reulcerated, and general syphilis followed.

Lindwürm[2] had a female patient with multiple chancroid. Upon one of these only he inoculated the secretion of a syphilitic chancre. No change occurred. The patient got nearly well, and left the hospital, but eight days afterward she returned; the ulcer which had been inoculated had broken out afresh, and had indurated. This sore remained open, while all the other chancroids got well and remained well. General syphilis followed.

Mixed chancre, then, is a reality, and does exist clinically. Hence the rule: Wherever the secretion of an ulcer possessed of specific induration, and followed by syphilis, produces by auto-inoculation a characteristic chancroid ulcer, itself auto-inoculable, such indurated ulcer is invariably a mixed chancre.

Mixed chancre is liable to all the complications which may affect either form of ulcer, even virulent bubo.

The methods of acquiring mixed chancre clinically are self-evident. Both poisons may enter simultaneously through the same abrasion. An individual with either variety of sore may inoculate himself, during sexual intercourse, upon the same spot with the other virus.

(*d.*) TRANSFORMATION INTO MUCOUS PATCH.—A chancre, which has lasted until the period for secondary manifestations has come on, may granulate upon its surface, retain or lose its induration, become covered with a whitish pellicle, and, in short, change into a mucous patch. This change has been critically studied by Ricord, Fournier, Deville, Devasse,[3] and others. It is most often observed upon women and children, and particularly upon thin skin and mucous membrane where there is continual moisture, a circumstance greatly favoring the change.

(*e.*) PHAGEDENA AND GANGRENE.—Phagedena, already studied in connection with chancroid (p. 490), may also, though more rarely, complicate true syphilitic chancre. The form most usually seen is the gangrenous. The gangrene may involve all the induration, in which case the latter ceases to be perceptible. The pultaceous and serpiginous varieties of phagedéna are very rarely found with pure syphilitic chancre. Their existence, especially the latter, which is most uncommon, makes it probable that the chancre was originally of the mixed variety. Sometimes

[1] *Op. cit.* [2] Quoted by Rollet. [3] *Archives Gén. de Méd.*, 1846.

the ulceration outstrips the induration, in which case the latter disappears; rarely both advance together. In four hundred and fourteen cases of syphilitic chancre, Bassereau found phagedena in sixty. In ninety-eight cases, Fournier found eleven of phagedena. A healing chancre may reulcerate and then become phagedenic. Bassereau, Diday, and others, believe that, when syphilitic chancre is phagedenic, the type of the general syphilis which follows is severe.[1]

For diagnosis of syphilitic chancre, *see* DIAGNOSTIC TABLE.

Prognosis.—If the chancre is syphilitic, so also is the patient.

For (*f*) syphilitic bubo, and (*g*) lymphitis, *see* below.

Treatment of Syphilitic Chancre.—No amount of cauterization nor any local treatment can prevent the development of general syphilis after the poison has once been absorbed, much less after the chancre has appeared (p. 509). Cauterization often hastens the healing, but induration is liable to reappear and to reulcerate, and nothing is gained to compensate for the pain of the operation. General syphilis is inevitable.

The best local treatment consists in the use of dry lint, or any mild astringent lotion, or, perhaps better, sprinkling with iodoform, or calomel, or the use of black or yellow wash. The sore is not painful, and will leave less of a scar, if unmolested, than if irritated and inflamed. Mixed sore is better cauterized to destroy the chancroidal virus, and the local treatment of phagedena is the same as already set down for that complication, attacking chancroid (p. 498). There is one important difference, however; namely, that the phagedena attacking syphilitic chancre may be kept up by the general debilitating influence of syphilis upon the patient's vitality, and consequently, in these cases only, the antidote to that influence, mercury, given internally, has exceptionally a favorable effect in retarding the progress of phagedena.

Internal treatment of syphilitic chancre is the same as for early syphilis, and treatment should be commenced in all cases where the diagnosis is undoubted. It has a marked beneficial effect upon the duration of the chancre. Where there is the least shadow of a doubt, no mercury should on any account be administered, until an eruption has cleared up the diagnosis.

(*f.*) SYPHILITIC BUBO.—The term "syphilitic bubo" has been applied to the indolent enlargement and induration of those lymphatic glands receiving the absorbents from a syphilitic chancre, not to the other glandular enlargements occurring in the course of syphilis. Syphilitic bubo consequently may occur in many different situations, according to the position of the chancre. They are usually found in the groin, because syphilitic chancre more often occurs on or around the genitals

[1] Phagedena, although it destroys the induration, does not protect the patient from the subsequent development of his syphilis, any more than does the cauterization of a syphilitic chancre.

than elsewhere. Thus the inguinal glands are affected in chancre of the penis, urethra, groin, lower part of abdomen, scrotum, thighs, perinæum, buttocks, anus, or rectum—the submaxillary in chancre of the lips or mouth, the preaural in chancre of the face. In like manner the subhyoid, post-cervical, axillary, epitrochlear, or other gland, may be the seat of syphilitic bubo. With syphilitic chancre of the genitals, the cluster of glands in the groin becomes enlarged and indurated, not a single gland but a group, which group, since Ricord, has become classical under the name of "pleiad." The pleiad consists of one gland larger than the rest, with one or two or half a dozen smaller glands, nearly all equally indurated on either side. The induration in some cases is not very strongly marked. They rarely become very large, varying from the size of a pea to that of a marble, and they retain their round or oval shape. They are freely movable under the skin, usually each distinct from the others. There is rarely any pain even on pressure, though slight tenderness may exist at first. This pleiad of indolent indurated glands may be (direct) unilateral, on the same side with the chancre or crossed, or (usually) bilateral, the glands on the same side with the chancre being most markedly affected.

This induration of the glands exactly resembles, in its woody, ivory-like feel, the induration of the chancre, but in some cases is more soft and elastic, like cartilage or India-rubber. The induration appears during the second week of the existence of chancre. Fournier records, as unique, a case in which the induration of the ganglia was not detected until the twenty-seventh day after the appearance of chancre. Sometimes instead of the usual pleiad there is but a single indurated gland, perhaps as large as a nut. Another variation is the development of a single enormous syphilitic bubo, as large as an egg, on one or both sides. These were found by Bassereau on dissection to consist of an agglomeration of many separate glands matted together by large indurated lymphatic cords, and tough, thickened layers of connective tissue. Occasionally a hardened lymphatic trunk may be traced from the induration of the chancre, to the indurated glands. In strumous subjects the glands are apt to be very large, and to partake of the strumous degeneration as well as specific induration.

Submaxillary and axillary syphilitic bubo often consists of one very large, hard gland. The glands constituting syphilitic bubo usually reach their full development in from one to three weeks. They then remain stationary for several weeks or months, occasionally for over a year. They are habitually present when the first general eruptions appear, and may at this time undergo a sudden increase in size and induration. Sometimes, on the contrary, without known cause, the glands speedily return to their natural size, and all induration disappears.

Suppuration of syphilitic bubo takes place so rarely that it may be said practically never to occur. But the syphilitic as well as the healthy

gland is subject to inflammation from injury, friction, or from inflammation of the chancre, and then suppuration may come on. Strumous glands also may degenerate, mat together, and slowly suppurate. When a syphilitic bubo suppurates, its pus is never auto-inoculable. With suppuration, there is of course pain in the affected gland. With "mixed chancre," suppurating bubo is not uncommon, and even virulent bubo may occur. Fournier thinks that pus once formed in a syphilitic bubo is more capable of absorption than in any other form of bubo. Syphilitic bubo bears no relation to the number or size of the chancres. Large buboes often become adherent to the skin. In three hundred and sixty-eight cases of syphilitic bubo, Bassereau saw suppuration in five per cent. Syphilitic bubo is so constant an accompaniment of syphilitic chancre, that practically it may be said to occur invariably. Fournier, in analyzing two hundred and sixty-five cases of syphilitic chancre, found ganglionic induration absent in five. Two of the individuals were very fat, and possibly the ganglia existed, but could not be found. The causes of the absence of induration in the glands are believed to be occasionally phagedena of the chancre (Fournier), the excessive smallness of the lymphatic glands in some fat people (Ricord); finally, in those rare cases where indurated chancre occurs a second time in patients who have had syphilis, the glands may not indurate. Syphilitic, spontaneous bubo (*bubon d'emblée*) does not exist. For diagnosis of syphilitic bubo, *see* DIAGNOSTIC TABLE.

Treatment.—The treatment of syphilitic buboes is that of early syphilis, but treatment has indeed little or no effect upon them, as they often persist long after the early cutaneous eruption has disappeared under treatment. Inflammation and strumous complications are to be met appropriately.

(*g.*) SYPHILITIC LYMPHITIS is a specific induration of the lymph-vessels and surrounding cellular tissue. Hard, smooth, and knotty cords are perceptible under the skin of the penis, feeling like the vas deferens, varying from the size of a knitting-needle to that of a goose-quill. They are insensitive to pressure, and the skin over them is not red. Starting in the induration of the chancre, they often do not reach to the root of the penis, but may extend to the ganglia. Sometimes, but rarely, the surrounding induration includes the blood-vessels. There may be one or more of these cords on one or both sides of the penis. Lymphitis, when present, generally precedes adenitis, coming on shortly after the induration of the chancre. It melts away usually during the disappearance of chancrous induration, lasting from three weeks to six months, and more. Rarely inflammation or suppuration may occur, but the pus is never auto-inoculable. If the chancre be mixed, so may be the lymphitis. Rollet states that syphilitic lymphitis occurs in about twenty per cent. of cases. No special treatment is necessary, except what may be required for inflammatory complications.

CHAPTER IV.

SYPHILIS.

Diagnostic Table of Syphilitic Chancre, Chancroid, Herpes, and Ulcerated Abrasion.—Of Syphilitic Bubo and the Bubo of Chancroid.—Of Syphilitic Lymphitis, and the Lymphitis of Chancroid.—General Syphilis.—Secondary, Tertiary, Malignant, Irregular, and Intermediary Syphilides.—Prognosis of Syphilis.—Duration.—Influence of Gout and Scrofula upon the Course of Syphilis.—The Ten General Characteristics of Syphilides.—Concomitant Symptoms of Secondary Syphilis.—Secondary Incubation, Syphilitic Fever, Alopecia, Indolent Glandular Engorgement, Sore-Throat, Analgesia.

THE following table is intended to serve as a summary of the broad, classical characteristics of syphilitic chancre and chancroid, with their accompanying buboes, as well as for the differential diagnosis of syphilitic chancre, chancroid, herpes, and ulcerated abrasions; of the bubo of chancroid, and that of syphilis; and of the different forms of lymphitis.

Syphilitic Chancre.	*Chancroid.*	*Herpes.*	*Ulcerated (Balanitic or other) Abrasion.*
1. *Nature.* — Always a constitutional affection.	1. Always a local disease.	1. Sometimes a local disease, sometimes a neurosis.	1. Always local.
2. *Cause.*—Sexual intercourse with a patient suffering from syphilitic chancre, or some secondary syphilitic lesion of or near the genitals, vaccination with syphilitic blood, accidental or designed inoculation of any vehicle containing the syphilitic virus, upon an abrasion of any portion of any tegumentary expansion.	2. Sexual intercourse with a patient suffering from chancroid of or near the genitals; accidental or designed inoculation with the secretion of chancroid, or that of virulent bubo.	2. Mechanical irritation, friction, as in sexual intercourse; chemical irritation, as of acrid discharges. As a sequence of cold, fever, or as an essential neurosis.	2. All of the causes mentioned for herpes, except the last three. —
3. *Situation.* — Usually upon or near the genitals, not very infrequent on the head, hands, or nipple.	3. Very rarely encountered except on or around the genitals.	3. Of very frequent occurrence upon the genitals.	3. Same.
4. *Incubation.* — Constant, not less	4. None after absorption of the poi-	4. None.	4. None.