General Treatment of Chancroid.—Chancroid is a local ulcer. It does not in any manner affect the constitution, but the constitution of the individual affects it, rendering it, perhaps, very slow and chronic in its course; or, from personal idiosyncrasy, phagedenic. Simple chancroid, then, requires no internal treatment, except such as is suggested by common-sense, and general hygiene. Mercury rarely fails to do absolute harm and to retard cure, perhaps even to induce phagedena. Chronic sluggish cases, which fail to respond to local treatment, unless the trouble lies in the mechanical irritation of motion, may be brightened up and started toward cure by all known tonic means; among which, change of air, cod-liver oil, and preparations of iron, hold the first rank. Phagedena being nearly always a constitutional, individual tendency, requires the active use of the last-named means, with good food, and perhaps wine. Ricord speaks highly of the tartrate of iron and potash internally. It may be given in gr. xx doses. Rodet praises large doses of opium as a means of cure.

(*n.*) Bubo (*βουβών, groin*) is a term which originally applied only to certain morbid conditions of the glands of the groin. It has, by modern usage, been adopted for inflammations or simply enlargements of these organs occurring anywhere in connection with lesions usually but not necessarily venereal. There are three distinct varieties of bubo: the simple inflammatory, including all the previous stages of engorgement; the virulent, the pus of which is auto-inoculable, producing chancroid; and the syphilitic. Of these, the second is and can be found in connection with no other conceivable lesion than chancroid. Its presence is absolute proof of the preëxistence of that form of ulcer. Syphilitic bubo, on the other hand, cannot exist unless the patient have syphilis. Simple inflammatory bubo, very common with chancroid, occurs also sometimes with any inflammatory lesion, gonorrhœa, syphilitic chancre occasionally, herpes, balanitis, or indeed may develop spontaneously. Pure syphilitic bubo does not suppurate, simple bubo usually does, but may not; virulent bubo necessarily does. Syphilitic bubo will be considered in connection with syphilis.

The diagnosis of bubo is simplified by its arrangement in the Diagnostic Table, Chapter IV.

Bubo does not necessarily occur in the groin. It appears in glands which receive the lymphatic trunks distributed to that portion of the body where the exciting cause (chancroid) occurs. It may be found in the axilla, in the epitrochlear gland, under the jaw, or elsewhere. It is most frequently encountered in the groin, because its exciting cause is usually situated on the penis. Bubo is more common in the male than in the female. Fournier believes that it occurs with chancroid, about once in three cases. The proportion between simple and virulent bubo is unknown, as no statistics have been compiled. Simple bubo is happily more common. The most usual seat of bubo is in the central gland

or glands of the inguinal chain, those lying over the great vessels. Bubo is single or double, usually on the same side with the lesion (chancroid) or on the other side (crossed) or double for a single sore; sometimes in double bubo, simple bubo will exist on one side and virulent on the other. Bubo only affects the first group of glands receiving the lymphatics from a part, there is no implication of glands further on, either in the case of simple or virulent bubo. Bubo, simple (sympathetic or inflammatory) or virulent, may appear early or late in the course of chancroid, even after the latter is nearly or quite healed. Simple bubo usually appears earlier (before the thirteenth day, Hairon[1]) than virulent bubo, although the latter, when it does commence, advances more rapidly. Puche[2] saw a virulent bubo come on after three years' duration of a serpiginous chancroid. Both forms of bubo are a little more commonly found with chancroid near the frænum, where the lymphatics are numerous and large. Both forms may be attended by granulations upon the ulcerated surface, constituting so-called vegetating bubo.

Simple Bubo.—This is the form commonly known as sympathetic bubo. It is essentially the same inflammatory glandular swelling as occurs after vaccination, or from an inflamed corn. Any inflammatory lesion of the penis may be accompanied by such a bubo (single or double) in the groin. Chancroid is the most common exciting cause, and especially chancroids which are inflamed. Bubo may occur without any visible causing lesion.

Symptoms.—The patient in walking feels a little pain in the groin, and thinks he has "strained" himself. On examination, he finds a small, oval swelling, perfectly movable under the skin, but painful on pressure. If properly managed, this may extend no farther, but usually the lump gradually grows. It becomes adherent to the skin at one or more points. The cuticle grows red, feels thick and porky, perhaps gets œdematous; finally, a central spot of softening may be detected; the skin becomes thin and shining; the bubo at last, like any other glandular abscess, bursts, discharges a creamy pus, and, after flowing for a few days or weeks, gradually contracts and gets well. The healing of bubo is very apt to be indefinitely postponed, in consequence of the motion to which the part is necessarily subjected in walking, every step opening the wound, and pulling upon the young granulations which are vainly trying to fill the cavity left by suppuration. Especially is this the case in feeble, broken-down constitutions, sickly youths, those who persist in drinking. Suppuration of simple bubo does not necessarily occur, and at any period, even after matter is formed, resolution is possible, but the majority open in spite of all efforts.

While abscess is forming, the ordinary constitutional symptoms exist. Pain, generally present, is sometimes wanting, but always increases as ulceration becomes imminent, and is generally greatly aggravated by

[1] Quoted by Rollet. [2] Ricord, "Leçons sur le Chancre." Fournier.

motion. The formation of pus is frequently announced by chill, and attended by febrile phenomena.

Now, this simple glandular abscess is subject to variations in its course. With strumous patients, usually several glands swell on both sides, and become matted together into a vast lump. These grow slowly, often without pain. They are particularly sluggish, and show very little tendency to suppurate. Their pressure inflames the skin, which may get red, thick, porky, often threatening ulceration at different points. The return circulation from the scrotum and penis is often obstructed, leading to œdema of these parts. Finally the inflamed tissues around the glands break down into pus, which, when discharged, is thin, watery, sanious. The breaking of the abscess under these circumstances does not materially diminish the size of the tumor, for the peri-glandular tissue has suppurated, and not the glands. The skin now gets thinned over the swelling, the opening from which the pus was discharged enlarges, perhaps one of the glands breaks down into suppuration, or it may protrude through the opening, covered by pale, flabby granulations. The pus may burrow along the groin, over the crest of the ilium, down the thigh, over the abdomen, into the scrotum, and new abscesses form at the blind ends of these canals, which opening, fistulous tracts are left, marked by a hard, cordy feel under the skin. The discharge of serous pus from these fistulæ continues sometimes interminably. Instead of suppurating, strumous bubo may remain for months in a condition of almost painless, indolent enlargement.

Again, simple bubo may be complicated by erysipelas or gangrene, but probably never by phagedena.

The pus of simple bubo is not auto-inoculable.

Virulent Bubo.—This form is often known as the bubo of absorption, since some of the peculiar chancroidal poison must be absorbed in order to produce it, whether by ulceration into a lymphatic trunk, or by migration of pus-corpuscles, is unknown. Without chancroid its existence is impossible. Virulent bubo is usually single, in one gland, on one side. It suppurates necessarily, but until it is open, there is no diagnostic feature which can positively distinguish it from simple acute inflammatory bubo, on the road to suppuration. This only can be said, that its course is more rapid, more acute, more inflammatory. Periadenitis occurs with virulent bubo also, the pus forming outside the gland usually ulcerating through the skin first. In such case the first pus that flows is simple, not poisonous, and the wound looks like that seen with simple bubo, but soon the deeper pus from the gland appears, poisons the wound, and gives it the well-known chancroidal aspect, and now the pus is freely auto-inoculable. Virulent bubo may discharge by a single opening. This is large at first, and subsequently enlarges, but, if, fortunately, adhesive inflammation has agglutinated its edges to the surrounding underlying tissue, no further poisoning takes place, the abscess assumes all the character of a true chancroid (abrupt edges, pultaceous, irregular base), passes through its regular stages, and finally gets well. Matters do not, however, always eventuate so fortunately, the thinned skin over the suppurating gland may fail to become bound down by adhesive inflammation, or to give way speedily at a single point, then the pus undermines a certain extent of integument, and perforates it in a cribriform manner. Burrowings, more or less extensive, go on. Hard, sinuous, everted edges, overhanging flaps and bridges of thin, purplish skin, long fistulous tracts, and poisoned pouches full of pus, serve indefinitely to prolong the virulent bubo, making its duration a matter of months, perhaps years.

Finally, virulent bubo, like any other chancroid, may be attacked by phagedena, or any of the other complications set down for chancroid (p. 488). Accidental auto-inoculation of the skin of the abdomen or thigh is not uncommon. The worst forms of phagedena are seen in connection with virulent bubo. The case which Fournier records as having lasted fourteen years and being still unhealed at the knee was phagedena of a virulent bubo. All the varieties of phagedena are found, but the pultaceous, serpiginous variety is most common. It usually travels up over the abdomen, but if very extensive seems to prefer to turn the flank and go down the thigh, rather than advance upon the chest, that region shown by Boeck to be unfavorable soil for chancroid. Phagedena does occur on the chest, but not commonly.

The nature and character of phagedena have been described. A phagedenic bubo does not necessarily, or indeed usually, exist in connection with a phagedenic chancroid, which latter may be attended by simple bubo, or leave the glands untouched; nor is lymphitis necessary, or indeed common. An insignificant-looking chancroid may be attended by a phagedenic bubo, and phagedenic chancroid may have no bubo at all.

Diagnosis.—The diagnosis between simple, virulent, and syphilitic bubo, will be found in the diagnostic table following syphilitic chancre. The *bubon d'emblée* does not exist in the sense originally attributed to the term; namely, a bubo without antecedent venereal ulcer, ushering in syphilis, and furnishing auto-inoculable pus. The absurdity of this is self-evident, for a virulent bubo never ushers in syphilis, nor indeed has it any thing to do with that disease. It is nothing more nor less than a chancroid. A bubo, however, may suppurate in the groin without necessarily any antecedent chancroid, as in connection with herpes, gonorrhœa, balanitis, an inflamed corn; or spontaneously, as may a gland in the neck or axilla; such a bubo, however, does not furnish poisonous pus. When a gland in the groin suppurates, and its pus is auto-inoculable, it has been preceded by a chancroid. The latter may have cicatrized before the patient presents himself, perhaps was situated in the urethra, or even in the rectum, but somewhere it is or certainly has

been. The intelligence of the surgeon may occasionally be taxed to find it.

There are no diagnostic signs between a simple and virulent bubo at first. When opened spontaneously or by art, the outlet does not enlarge in simple bubo; in virulent bubo it does, and shows all the characteristic marks of chancroid. Again, if suppuration can be arrested in an inflamed gland, it must have been simple bubo (unless syphilitic); virulent bubo must necessarily suppurate.

Treatment of Bubo.—The preventive treatment of bubo is rest, and the avoidance of such causes as tend to inflame the chancroid. The most positive preventive treatment is the absolute destruction of the chancroid with caustic. In such a case if the simple ulcer left by the fall of the slough is still able to excite a simple bubo, yet virulent bubo and its attendant phagedena can no longer occur, tincture of aconite and of iodine locally are of little use without rest; the successes attributed to them are largely coincidences. They perform one service, however—they give the patient something to do; they keep him from incessantly handling the part to see how matters are progressing. Mercurial ointment spread upon lint may be laid on the surface for the same purpose; but all substances to be rubbed in are harmful, since friction is bad. Rest in bed and a very light poultice will usually disperse a bubo better than any of the above methods.

Besides rest, there are three other agents which may avert suppuration:

1. Blister, repeated as soon as the skin has reformed.
2. Pressure, which, if applied early and judiciously in mild cases, is sometimes effective.
3. Leeches, plentifully applied around the swollen gland.

The latter treatment is only applicable in the early stages of bubo, for, should the swelling prove virulent, suppuration is inevitable, and, if the leech-bites are near the point of opening and have not cicatrized, they are pretty sure to become inoculated and form so many chancroids. If the tendency to suppuration advance very slowly, the bubo is certainly simple; if rapidly, large, hot poultices should be constantly applied to hasten it, and the abscess may be allowed to open itself; but, if, from its very rapid course, it is believed to be virulent, an opening should be made as soon as any fluctuation can be felt, to let out the poisonous pus, and save destruction of tissue. In this way burrowing may be averted, as it may also by properly-applied pressure. It is a good rule to open early in any case. If it be simple bubo, no harm is done; if it be virulent, the chancroidal ulcer following is by so much less extensive. Small collections of pus should be punctured, large ones extensively laid open. If the skin does not appear to be adherent, some caustic paste may be preferred to incision. If any outside wounds exist (leech-bites) at the time of opening bubo, they should be carefully protected. Once open, if the bloody, thinnish, unhealthy look of the pus suggest virulent bubo, the poultice should be discontinued, otherwise it is better kept up for some days. All cavities, if large, should be thoroughly cleansed several times daily with warm water, and then injected with a mild solution of carbolic acid or permanganate of potash, dilute alcohol, or some other detergent lotion. After virulent bubo becomes an open ulcer, its treatment is that of chancroid. Where large glands lie out in the ulcer and have not suppurated, or if all the suppuration have come from peri-adenitis, in cases where the bubo was strumous, these glands should be removed. This is best done with the finger, tearing them away, or they may be tied off with a ligature. Even when cut away they rarely bleed much.

Burrowing and phagedena in the groin are treated in the same manner as when occurring with chancroid. The pastes, carbo-sulphuric and Vienna, are well suited to phagedena in this region. Where suppuration has been stayed, and in all cases of chronic bubo in which strumous degeneration of the gland plays a large part, resolution may be hastened by counter-irritants and pressure. The latter is conveniently applied, the patient being on his back, by placing a bag of sand or fine shot over the swollen glands, or by a spica bandage over compressed sponge laid upon the swelling, the bandage afterward being slightly moistened. Trusses are too irritating, but it has been noticed that persons wearing trusses and afterward getting chancroid rarely have bubo upon the side of the hernia, probably from previous atrophy of the gland through prolonged pressure (Ricord). Of counter-irritants mild repeated blistering is perhaps best. Tincture of iodine has positive resolving power in this stage. Punctate cauterization is well spoken of by Fournier. It consists in touching the skin in fifteen or twenty places over the tumor with the hot iron, repeating the operation every eight or ten days; no scars are left.

Internal remedies for chronic and phagedenic bubo are the same as for similar conditions of chancroid.

(*o.*) Lymphitis,[1] or inflammation of the lymph-vessel, never occurs without some accompanying inflammation of the connective tissue around the vessel, peri-lymphitis. Its varieties are identical with those of bubo; namely:

1. Simple inflammatory lymphitis, which may be found in connection with any inflammatory abrasion, simple, chancroidal (most common), or syphilitic (least common).
2. Virulent lymphitis, only found in connection with chancroid.
3. Syphilitic lymphitis, found only with syphilis.

The first two varieties are indistinguishable until they suppurate.

[1] The term "lymphitis" is critically incorrect, signifying, as it does, inflammation of the lymph. General usage, however, justifies its employment, since it is shorter than the more accurate term "lymphangitis"—inflammation of a lymph-vessel—synonymous with angioleucitis—inflammation of white vessel—first employed by Velpeau.

One or two hard, knotty cords are felt under the skin of the penis, usually at the side. They commence at the chancroid (or other lesion), extend for a greater or less distance up the penis, sometimes up to the glands in the groin. Occasionally they can be felt only toward the root of the penis. The integument over them, in mild cases, is unaltered; in severer cases their course is marked by a red line. They are painful to the touch, and during erection. The penis is often red, erysipelatous, swollen, œdematous, and, in severe cases, there are fever, sleeplessness, etc.

Lymphitis terminates in resolution or suppuration. In virulent lymphitis, the latter is inevitable. In the simple form suppuration may occur in one or more spots, resulting in abscesses, which discharge and get well. In virulent lymphitis similar abscesses form along the line of the vessel, open, furnish auto-inoculable pus, and remain as chancroidal ulcerations.

Either form may exist without bubo, with simple bubo, or with virulent bubo. The affection is not common, and bubo is most frequently encountered without it.

Treatment.—Rest, cooling lead-water or spirit lotions, collodion for excessive œdema, perhaps puncture, poultice for severe pain, and opening abscesses, when they form, comprise the treatment. Simple abscesses are best treated with water-dressings; virulent abscesses exactly like chancroids, which indeed they are. Internal treatment has no influence over lymphitis.

CHAPTER III.

SYPHILIS.

Nature.—Unity and Duality.—Length of Time required for Absorption of Virus.—Analogy with Vaccine Virus.—Second Attacks of True Syphilis.—Transmissibility to Animals.—Incubation of Syphilitic Chancre.—Induration, parchment-like, split-pea, diffuse.—Ulceration.—Secretion.—Pain.—Nature of Scar.—Auto- and Hetero-Inoculation.—Vaccinal Syphilis.—Multiple Inoculation.—Fluids capable of transmitting Syphilis by Inoculation.—Methods of Transmission of Syphilis.—Duration of Chancre.—Number.—Size.—Situation.—Form.—Symptoms of Urethral Chancre.—Course of Chancre.—Complications.—"Mixed Chancre."—Transformation into Mucous Patch.—Phagedena and Gangrene.—Treatment of Chancre.—Syphilitic Bubo.—Lymphitis.

Syphilis is a general dyscrasial blood-disease caused by the absorption of a peculiar virus into the circulation, manifesting itself primarily by the appearance of a poisonous sore at the point where the virus entered, and afterward by a succession of morbid manifestations occurring at longer or shorter intervals—manifestations which, in their totality, interest every organ and tissue in the body.

The virus is only known by its effects. Exactly what it is, has not yet been determined, either by the microscopist or chemist. Different

observers have claimed to have discovered certain vegetable spores in the secretion of syphilitic chancre and in syphilitic blood, but their investigations and conclusions have been disproved, and cannot be accepted. The last effort in this direction is the discovery in syphilitic blood, by Losdorfer, of certain peculiar microscopic bodies, which he believed to represent the syphilitic poison. Further investigation, however, showed that the blood of any cachectic hospital patient would furnish the same bodies, whether the individual had syphilis or not, proving it to have been a cachectic and not a syphilitic corpuscle, and thus ending a charming delusion.

Diday [1] has called attention to the fact of an apparent antagonism between the syphilitic virus and cancer. Numerous inoculations in one case of syphilitic chancre, in others of secondary lesions, made upon patients with cancer by Diday, Rodet, and Rollet, have failed invariably [2] (Rollet).

Syphilis has been happily compared by Hutchinson [3] to the contagious exanthemata, small-pox, measles, scarlet fever, as possessing all the peculiar characters common to this group of diseases, namely: it is communicated only from one diseased person to another healthy one; it has a stage of incubation before any sign of the disease appears; it has a stage of efflorescence, which indeed in syphilis is prolonged and marked by relapses; it has a period of decline, and sequelæ—the later tertiary lesions—which do not always occur, and during which the disease often ceases to be communicable. Again, most of the various efflorescences of syphilis, like those of the other exanthemata, tend to pass away spontaneously after a time; thus, as Fournier aptly puts it, affording a triumph to every method of treatment. One attack confers immunity from another often for life, always for a long period. The disease is transmissible by inheritance, as in the case of the other exanthemata when the child is born before the mother recovers from disease. Finally the sequelæ do not constitute transmissible disease, even by inheritance. As in the other zymotic diseases, a portion of the virus, however small, is capable of infecting the whole body, as if by fermentation. Thus the analogy of syphilis with the contagious exanthemata is clear, only its febrile symptoms are less marked, its efflorescences more varied, and its course much more protracted—counted by months instead of days—and more subject to variation, as well as more amenable to treatment. Syphilis is fortunately only contagious, it is not infectious; its poison is not volatile, is not diffused in the air; direct contact of the virus with a surface capable of absorption is essential to the production of the disease.

[1] "Histoire naturelle de la Syphilis."

[2] Although this antagonism may exist, still cases of undoubted cancer have been encountered by the authors upon patients, who, at an earlier period of life, were certainly affected with syphilis.

[3] Reynolds's "System of Medicine."