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PRACTICAL CLINICAL LESSONS

ON

SYPHILIS AND THE GENITO-URINARY DISEASES.

LESSON I.

Nature of Gonorrhœa—Of Chancroid—Of Syphilis—Infective Principle of Syphilis a living Germinal Cell—Its History dating back over 2000 Years B.C.—Syphilis never of Spontaneous Origin—Always Acquired from a Human Being suffering with Syphilis—Always Requiring a Breach of Surface for its Introduction—The Virus of Syphilis not an Irritant—The so-called Incubation of Syphilis—Its Practical Importance—Admixture of Syphilitic Secretions with Vicious Uterine Secretion a common cause of error in Diagnosis—The Initial Lesion of Syphilis due to a Localized Cell Proliferation—Not Necessarily resulting in an open Lesion—Clinical Cases illustrative of the Development of the Initial Lesion of Syphilis—Treatment by Excision.

GENTLEMEN: Through the light of modern teaching and experience, we recognize *three* separate and distinct contagious diseases resulting from venereal contact; viz., *Gonorrhœa, Chancroid, Syphilis.*

1st. GONORRHŒA.—A vicious, non-specific inflammation of mucous membrane, characterized by free purulent secretion without ulceration, chiefly occupying the urethra of the male, and the vagina and urethra of the female; exceptionally, the mucous surfaces of the bladder, the eye, the nares, the rectal and buccal cavities; usually, though not necessarily, of venereal origin; its contagious property transferred to sound mucous membrane without breach of tissue; its action immediately following contact; its vicious principle incapable of

transmission through the general circulation; its occurrence predisposing to subsequent attacks.

2d. CHANCROID.—An acute, contagious ulcer of venereal origin, whose contagious property is incapable of contaminating the blood, and hence can never establish a constitutional disease, nor be acquired by hereditary transmission; is characterized by an acute ulcerative action, with free suppuration; is commonly initiated through a breach of surface, but possibly occurs upon sound tissue; is usually multiple, and may occur repeatedly in the same individual.

3d. SYPHILIS.—A specific, contagious, constitutional disease, caused by the inoculation, upon any part of the human body, of a peculiar principle or *contagium* called the *Syphilitic virus*, which, after an indefinite period of apparent rest, or so-called incubation, produces, at the point of inoculation or entrance of the *contagium*, a characteristic lesion; this followed by another period of apparent rest, to which succeeds a group of well-established evidences of the contamination of the general system. The characteristic initial lesion is usually solitary; sluggish, and non-suppurative in its development; inoculable with difficulty upon the person bearing it; and as a rule occurs but once in the same individual.

During the course of clinical lessons which we inaugurate to-day, I propose presenting to you cases of each one of the above-named diseases, under a variety of circumstances and in different phases of their development. However ample the field from whence clinical cases are drawn, it is scarcely possible always to secure such a choice as will permit the pursuance of a rigidly systematic arrangement in their presentation; I shall, however, endeavor to select the cases so as to show you the consecutive manifestations or lesions of each disease, as far as circumstances will allow.

To-day I purpose presenting to you a number of persons exhibiting one or more phases of the most important of the three diseases just mentioned, viz., *Syphilis*. This disease is produced by the inoculation of a specific virus upon any part of the human body, as previously stated. Of the origin, nature or composition of

this virus—vital, physical or chemical—we know practically but little.

The microscope has been brought into requisition by distinguished experts through the last quarter of a century, with the expectation of isolating and analyzing this so-called virus, but it has eluded all search. Similar investigation as to the origin of such contagious diseases as variola, vaccinia, relapsing fever, and the cattle-plague,* have resulted in establishing the fact that a degenerated, living, germinal cell contains the infective principle or *contagium*, the so-called virus, through which these diseases are communicated. Beale was the first to claim that a similar origin would be found for syphilis, but he failed to make the actual discovery. As we proceed, however, it will be found that much valuable circumstantial evidence will be met, in corroboration of Beale's view, and afford a possible interpretation of the syphilitic processes in harmony with recognized physiological and pathological laws.

Of the history of syphilis so much has been written that I have not the time, if I had the inclination, even to epitomize the labors of syphilitic historians. I will briefly state that books have been written to fix its origin at about the fifteenth century, attributing it to the effects of excesses in camp at the Siege of Naples, 1494; others to prove that it originated in America, and was carried to Europe by Columbus at about the same period; others, again, and with more reason, assert that Moses, the great Jewish lawgiver, knew about it; and the dispute as to the bad eminence of having originated syphilis ran high, and higher, involving poets, historians and doctors, getting up no end of bad blood, until a recent time (1863), when a Frenchman, Capt. Dabry by name, in translating a very ancient record of Chinese medical lore, found this same syphilitic disease thoroughly described in its various stages as existing and flourishing over two thousand years before the Christian era.

Its antiquity, and its prevalence to a greater or less

* Beale on the Nature and Origin of Disease Germs.

extent in every known country, enable us safely to affirm that it has not been from lack of opportunities to study the development of syphilis that its constituent elements are unfamiliar to us. On the contrary, it has been observed with probably more care, with more scrupulous nicety, with more laborious and painstaking accuracy, than any other disease with which the human race are, or ever have been, afflicted. It has not only been studied and observed by the keenest, the most erudite, the most profound practitioners and philosophers the medical profession has ever produced, but it has been the altar upon which not a few have offered up their own bodies as subjects of scientific experiment, throwing health—even life itself—into the investigation of this foulest and most terrible disease. With the great John Hunter heading the list, fully half a score of recorded names attest the courageous self-abnegation, the grand enthusiasm of our professional brethren in the past, whose labors and sufferings furnish us to-day with all-important and indisputable facts concerning the evolution and development of syphilis. Through such earnest investigations, and by extended observation of the disease as accidentally acquired, it has been accepted—

1st. That syphilis is never of spontaneous origin; that no emanations from natural causes, no admixture of diseased conditions, no intermingling of necrotic elements, no combination of vicious indulgence, is capable of establishing this disease *de novo*. It has always and invariably as a starting-point a human being suffering with syphilitic disease. Every syphilitic has contracted his syphilis from some antecedent syphilitic—has received into his blood a virus or *contagium* which has circulated in the blood of another suffering with syphilitic disease.

2d. That for its introduction into the human system it requires a breach of surface—a solution of continuity; that it is not absorbed through sound tissues; that it is not acquired through inhalation. An entrance of the syphilitic principle always requires a pre-existing artificial port of entry. This may be accepted as an unvarying

rule as regards the *acquisition* of syphilis. The child may contract the disease *in utero* from the diseased blood of the mother. The mother may, it is claimed (not proven), become infected through the child in her womb, diseased by the influence of the male parent. These possible exceptions do not invalidate the spirit of the law requiring a breach of continuity for the entrance of the syphilitic virus into the human organism.

Though the constituent elements of the syphilitic virus are not known, this much we do know, viz., that the secretion emanating from a certain well-recognized kind of sore,—which we call the chancre, or the initial lesion of syphilis,—when introduced, by the aid of a lancet, under the cuticle, or applied to an abraded surface anywhere upon a healthy individual, produces, after a definite period and with absolute certainty, a lesion presenting similar characteristics, and is followed by certain other evidences of a contamination of the system which cannot be produced by any other known agency.

We know also that the aforesaid secretion in which the virus is hidden, when free from extraneous matters, is of a bland, unirritating nature in its local action upon living tissues; that, introduced through an artificial puncture or an accidental abrasion, it gives no immediate token of its power—it does not in any way interfere with the natural, rapid and complete healing of the wound. In this particular there exists a radical difference between the syphilitic virus and that of the local contagious ulcer called the *Chancroid*, and of the purulent secretion of a *Gonorrhœa*; both of which produce an *immediate* inflammatory action on the site of their initiation.

Given, then, a case in which the syphilitic virus has been introduced into the system through a puncture or an abrasion and has been succeeded by a complete healing of the wounded part, let us consider what follows.

1st. A period of incubation, so called,—a period of apparent rest; a period during which the subject of the experiment is entirely free from the least evidence of the introduction of the poison into his economy, either

at the point of inoculation, or through any constitutional disturbance or internal or external sensation of any description whatever.

No feature in the development of syphilis is of more practical importance than this period of apparent incubation. A failure to appreciate it is fraught with discomfiture to both physician and patient. Lulled into a false security by the healing of a lesion following an illicit venereal contact—even assured of freedom from disease by his medical adviser—many an unfaithful benedict returns to his marital allegiance, only to realize the disaster after an innocent wife has been infected with syphilis, and through her the disease, it may be, transmitted to a luckless embryo.

The period of apparent incubation, according to authorities, varies in different subjects from ten to seventy days. The causes of this variation are not well understood. It is supposed by some to depend upon the degree of activity of the particular specimen of virus inoculated; by others upon some peculiar condition or idiosyncrasy of the subject. The fact, however, that in the great majority of cases of experimental inoculation of the virus, from whatever source, the results are much more uniform, being seldom less than eighteen nor more than thirty-five days, would lead to the belief that other influences than quality of the virus or peculiarity of the individual affects the term of *apparent* incubation. Experiments in regard to the contagiousness of non-specific pus have demonstrated its erosive property under certain conditions. Secretions from a diseased uterus, and even from the Schneiderian membrane, are known to produce excoriation of sound mucous tissues and of integument, and even to set up a true ulcerative process. We may then easily admit the possibility of admixture of the simple non-irritating secretion from an intra-vaginal syphilitic lesion with secretion from a diseased uterus, capable of effecting a solution of continuity in sound tissue; the time required for such an effect varying with the degree of irritant power and the condition of the part to which it is applied. Thus, in the folds of integument upon the penis,

where heat and moisture are at the minimum, with even a decidedly vicious secretion, many days might elapse before the dry cuticle would be eroded sufficiently to afford entrance to the accompanying syphilitic poison; or, on the contrary, should the secretion be applied to the moist delicate lining of the prepuce, the solution of continuity would be greatly facilitated. Again, in case of fracture of the skin or mucous membrane, ulcerative action might be set up coincidentally with the vicious contact; and yet in neither case would the lesion be due to or indicative of the presence of the syphilitic virus. And this fact, that the syphilitic virus *may* be associated in the same individual with vicious uterine secretions, and *also* with the specific secretions of chancroid capable of effecting a solution of continuity in sound integument or mucous membrane, naturally leads to frequent errors in diagnosis. There is, I repeat, absolutely nothing in the condition of the patient, at the point of entrance of the syphilitic poison, or at any other point, which can be considered a proof of syphilitic infection, until the termination of the (so-called) period of incubation. And this time is announced by a peculiar change in the condition of the tissues *at the point of entrance of the virus, and nowhere else*; this change, too, occurring equally whether an abrasion or ulceration has been previously established at this point by other causes, or when the healing has immediately followed the introduction of the virus. An exudation or development of cellular and fibro-plastic material takes place in the tissue at the point of entrance of the *contagium*; and this process results in an *induration* perceptible to the touch, and establishes a well-defined characteristic mark of syphilitic infection. This, under the microscope, is found to consist of lymphoid or germinal cells apparently accumulated and *proliferated in loco*, as a direct result of the syphilitic inoculation. The excessive localized proliferation of cell elements constitutes a marked feature in every stage of syphilis. Its first appearance at the site of entrance of the poison forms the initial lesion, or the first positive manifestation of the syphilitic influence. The

course and duration of the initial lesion varies in different subjects, in some cases appearing as a nodule covered by sound cuticle or mucous membrane, varying from a slight increase in thickness to a distinct cartilaginous nodule as large as a pea. It may remain stationary for a time, and then terminate in resolution—that is to say, undergoing fatty degeneration, become quietly absorbed; or it may take on a more active process, involving the destruction of the overlying tissue and an acute disintegration of its elements; carrying away with them a certain limited amount of the original cellular tissue involved in its meshes, and producing an ulcer-like lesion, but which, however, is independent of true ulcerative action; its secretion thin and serous, made up, not of pus, but of hastily generated cell material; its natural course sluggish, and but little influenced by local treatment; healing at last, *over* the induration, while the induration continues dense and characteristic, not unfrequently throughout the entire course of the constitutional disease.

Some of the points of interest in regard to the incubation and induration of syphilis, which I have briefly set forth, will be apparent in the cases which are now before you. From the first, James B., aged 23, we glean the history of an exposure about the 13th of August last, followed by a soreness of the "bridle" or frenum, which lasted for two or three days, from which time nothing especial was observed until the second week in September, when he noticed a "bunch" in the loose tissue of the frenum which became chafed about a week ago, and made a sore, and which grew gradually larger up to the present time. It is now, as you can see, about the size of a threepenny piece, shallow and smooth, presenting a fine granular surface with but little moisture. As you pinch it up between your thumb and finger, the induration of which I have spoken may be distinctly felt; and I present this case to illustrate the history of its origin, and which is classical for a single variety, and that you may test the induration, which is well marked,

In Case II., George W., a baker, aged 19, presents

three points of apparent ulceration, one upon the side of the frenum about the size of a split pea, and two a little larger, in the furrow behind the glans penis. George has no distinct remembrance of the time after exposure when these sores first appeared, but thinks about a week or ten days; has had them about a fortnight; has been to a physician, "who burned them with caustic" several times.

The true syphilitic lesion is usually, though not always, *solitary*, as in the case first presented. Here the existence of three points of lesion, and appearing within *two* days from exposure, militates against the idea of their syphilitic nature. You will also remember that the characteristic syphilitic lesion at the point of entrance of the virus is seldom less than 15 or more days. There is, however, a distinct induration about the base of these sores, little if any less than that which you recognize in Case I. But when I tell you that simple sores and even incised wounds become indurated by irritant applications, and you recall the patient's statement that these have been "burned out with caustic," you will realize the difficulty of making a clear diagnosis at present. We will advise a simple water dressing, and if the induration is due to the application of the caustic it will soon disappear.

Case III. We have here in a patient, 36 years of age, a mass of induration of the size of a hickory-nut, developed in the tissue of the inferior portion of an elongated prepuce. Phymosis, or closure of the preputial orifice, has resulted, and is almost complete. He complains, from this cause, of much difficulty in passing his water. On pressure, a gray, serous-looking fluid exudes from the preputial orifice; a shallow excoriation of its inner surface is observed when the prepuce is strained back. The glands of the groin are distinctly enlarged, but painless; a distinct papular eruption covers his chest, arms and back. The history of this patient develops an exposure two months ago—not for a month previous, and not since. Three weeks after connection he noticed a "hardness," about the size of a pea, inside the prepuce, which has been growing ever since. He has had no

trouble from it except the pain in passing water. This case appears to me a clear one of syphilis. If the induration and its history were not sufficient, we have positive proof in the additional evidence furnished by the glandular swellings and the coppery papular eruption—the significance of which I shall have occasion to refer to on a future occasion. An operation is here called for, to remove the indurated mass on account of the phymosis which it has occasioned. I shall, therefore, proceed to remove the entire prepuce by the introduction of a director upon the superior surface of the glans, and back as far as the fossæ; then passing along it a curved bistoury, I bring it out over the fossæ glandis, and, dividing the intervening tissue, remove the redundant mass, including the induration, with a single cut on either side, completing the incisions at the frenum.

You will observe that the hemorrhage here is very slight, no vessels of much size having been severed. Usually there is quite free bleeding from the vessels of the frenum, in such case requiring ligature. The operation will be completed by bringing the cut surfaces into apposition with a very fine silk thread, by the Glover's suture, which I invariably use in bringing the cut edges together after a circumcision.

LESSON II.

Non-Auto-inoculability of Chancre—Exceptional Cases—Prevention of Constitutional Infection through Excision of the Chancre Denied—Rapidly of Infection through Germinal Material in Proportion to the Rapidity of the Cell Proliferation and Size of Corpuscles Diminishing in same Ratio—Syphilis Characterized by Comparatively Slow Proliferation—Infective Cells in Syphilis not necessarily Differing greatly in Size from Normal Germinal Cells—Differing only in Amount, Peculiar Aggregation, and Characteristic Infective Property—Gross Appearances of the Excised Chancre—Microscopical Examination—Beisiadecki's Observations in Twenty Specimens—Confirmation of the Claim that the Initial Lesion is Formed by Cell Proliferation, *in loco*, and not the Result of Inflammatory Action—The Open Lesion a Legitimate Result of Interference with the Vessels of Nutrition from Mechanical Pressure caused by the Cell Accumulation—Clinical Cases Illustrative of Characteristics of Chancroid.

In briefly characterizing the initial lesion of syphilis, in the previous lesson, I spoke of it as *non-inoculable upon the person bearing it*. This may be laid down as a rule where the *Chancre* (as this lesion is usually termed) has not been subjected to irritation sufficient to set up a purulent discharge. When pus is present, however, inoculation may result in an ulcerative lesion. In Case III., previously cited (p. 25), the lesion was apparently free from this complication, so that its removal will not be liable to inoculate the cut surfaces.

The effect of removal of indurated chancre by excision has been the subject of controversy, some authorities claiming that early excision of the initial induration may wholly prevent systemic infection. Auspitz and Kölliker, of Vienna, the former in 1877 and the latter in 1878, reported cases, in all numbering about 40, where such excision was believed to be effectual in preventing the occurrence of constitutional syphilis. It was even stated that in several of these cases enlargement of the inguinal glands was already well marked at the date of the operation. It is difficult to understand how such a claim can be seriously advanced when there is such