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COURSE OF LECTURES ON VENEREAL AFFECTIONS DELIVERED AT THE HOPITAL DU MIDI, PARIS.

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LECTURE X.
May 26, 1843.

Gonorrhœa in females—Complications—Uterine gonorrhœa—Treatment—Gonorrhœal ophthalmia—Causes—Symptoms—Diagnosis—Prognosis—Prophylactic treatment—Therapeutic treatment.

GENTLEMEN,—The tendency of gonorrhœa in women to run into the chronic stage is well marked only in deep-seated vaginitis. Chronic urethritis, less common than in the male sex, very seldom produces anything like strictures. Without doubt, the most rebellious form of the disease is uterine catarrh.

Complications.—I shall here follow the same division as in the study of the symptoms. *Vulvitis* may be accompanied by œdema of the labia majora, and the swelling be carried to such a degree as to cause a morbid disposition analogous to phymosis. Also, in consequence of the same complication (œdema) in women presenting large nymphæ, and comparatively small labia, the distension of both may induce a real strangulation of the former, resembling paraphymosis.

Instead of serosity, pus may be contained in a circumscribed abscess, or diffused in the neighbouring cellular structures; hence suppuration of the labia, or abscess, more easily determined by the previous existence of follicular cysts. Prurigo, eczema intertrigo, may both be found in combination with the disease. More rarely than in the male subject, *urethritis* may occasion dysuria, or even more or less complete retention of urine. The inflammation may extend to the bladder, or give rise to hæmorrhage from the urethra.

Vaginitis presents few special complications, except phlegmonous inflammation, and this is by no means common. As to *uterine gonorrhœa*, it may produce true urethritis, with all its symptoms. But another and more frequent accident of uterine catarrh is *ovaritis*. I have met with it often, and believe that it may not inaptly be compared with epididymitis. The inflammation of the ovary seems to me, in fact, to bear towards uterine catarrh the same ratio as epididymitis does to urethritis. Its symptoms are swelling of the organ, pain on pressure of the hypogastric region, and also on examination *per vaginam*. The pain increases when the surgeon attempts to draw the uterus from the inflamed ovary, and also, from the same cause, when the patient lies upon the *healthy* side, the weight

of the womb dragging downwards, and distending the broad ligaments of the diseased ovary. The anatomical appearances have not, to my knowledge, ever yet been investigated; but I am strongly inclined to think that many ovarian dropsies have no other origin.

Gonorrhœa in women may accompany chancres, or be the symptom of their existence. Another, and less generally known, cause of vaginal discharge is the presence of mucous tubercles developed within the genital organs, in consequence of secondary syphilitic infection. Ulceration, or erosion of the os tincæ, is comparatively rare in the acute period of gonorrhœa. This alteration communicates to the orifice the red, glistening aspect, somewhat resembling that of a freshly denuded blistered surface. When the disease is of long standing, the follicles of the neck of the uterus acquire a morbid development with granulations, which may impose on the unpractised eye for ulceration. These granulations proceed from the cavity of the os tincæ, and both lips are affected. In true ulceration the case is different; in the virgin the os tincæ is circular, and the circumference is excoriated; in women who have borne children, the posterior lip alone is commonly the seat of the disease. To explain this circumstance, it has been asserted that the posterior lip, being more dependent than the anterior, receives the uterine discharges, and is thereby irritated and excoriated, whilst the other lip remains healthy; but this alleged declivity exists only in the horizontal position necessary for the introduction of the speculum, and I conceive, on the contrary, that in the erect position the anterior lip is more dependent than the other, from the natural direction of the axis of the womb. When we reflect on this direction, when it is recollected that *anteversion* of the uterus is a *very* common deviation, it appears more probable that the habitual contact of the posterior lip of the os tincæ with the posterior wall of the vagina, is of itself a circumstance well calculated to keep up the irritation.

Treatment.—In inflammation of the vulva, lotions with nitrate of silver (four or five grains to the ounce) will suffice, particularly if attention be paid to keeping the parts separate by the introduction of dry lint between them. As deep follicles may escape the action of the wash, it will be sometimes necessary to inject the fluid directly into their sinuses, or even to cut them open. In the phlegmonous variety of this disease, baths and an antiphlogistic regimen will readily subdue the symptoms. Scarifications will be proper in case of œdematous complications, and excision of the nymphæ, if their size be considerable. Here abscesses should be opened at an early period, as they soon betray a tendency to extend towards the rectum.

During the acute stage, the treatment of *vaginitis*

should be conducted on the antiphlogistic plan. In the chronic period, much benefit may be derived from injections of nitrate of silver, of the strength above mentioned. Injections with acetate of lead, sulphate of zinc, or alum (about two scruples of one or the other to a pint of water), will answer the same purposes. Cauterisation with nitrate of silver over all the membrane will be found advantageous in some cases. I proposed, some years since, to prevent contact between the inflamed surfaces by plugging the vagina. This can be done by rolling into a cylindrical shape a quantity of "charpie," fixed in the middle of its body by a string, which serves to extract the plug from the vagina, into which it has been introduced. The operation must be repeated twice a-day. The late M. Hourman modified my plan, by using, instead of charpie, cotton—a bad substitute, as well as English lint, inasmuch as neither can absorb the secretions so well as charpie, but become, as it were, varnished over, and leave the irritant fluid in contact with the inflamed membranes, thus keeping up their excitement. The plug may serve as the vehicle of various therapeutic agents, such as calomel, alum, &c. From the observation that inflamed surfaces, when exposed to air, soon dry up and cure, I concluded that the vagina, placed in similar circumstances, would likewise be benefitted, and consequently had a sort of ventilating speculum constructed for the purpose; but, just as I flattered myself upon the ingenuity of my discovery, I found I had been anticipated centuries ago by Ambrose Paré, who used a similar instrument, a design of which will be found in his works.

For the relief of patients laboring under *uterine catarrh*, little was formerly done except emollient and astringent vaginal injections. I was the first to propose, in the year 1833, a mode of treatment directed against the uterus itself; it will be found, with all its details, although other persons have put in posterior claims of invention, in the "Mémoires de l'Académie Royale de Médecine, 1838, second fasciculus," and consisted in injecting through into the os tincæ.

M. Breteau, M. Hourman, and M. Robert, have objected to this method, from the fear of producing urethritis, or even peritonitis, from the passage of the injected fluid into the abdominal cavity, through the Fallopian tubes. It was found, on the dead subject, that the injected substance may be forced into the abdomen, and on one body, that of a woman lately confined, M. Nelaton even found it in the uterine sinuses.

These experiments are perfectly true and correct on the dead body; but I contend that the conclusions drawn from the dead subject, with respect to the living, are erroneous. There is no doubt that the injection may be forced into the abdomen when the neck of the uterus is firmly tied to the syringe, so as to preclude the possibility of the return of the injection through the os tincæ; but the conditions are far different in the living subject. Both M. Récamier and myself have clearly established that the tube should be loose in the cavity, and that no violence whatever should be employed. Again, I will remark, that the fluid injected, from its very nature, coagulates the uterine secretions, thus forming a fresh obstacle to its own passage into the peritoneum, so that on

this ground, at least, I conceive the fears entertained by the opponents of uterine injections to be utterly devoid of foundation.

The injections may be composed of a weak solution of nitrate of silver, of nitrate of mercury, or of tincture of iodine. The instrument with which I propel the injection is a double syringe; the internal tube contains the stimulating fluid, the external tube common water, with which the other injection is washed away.

The quantity of the compound injection should be very small, and not exceed a quarter of an ounce (a teaspoonful). The immediate effects of the operation are very singular, and very analogous to those which follow injection of the tunica vaginalis. Lumbar and hypogastric pain, hysterical fits, fainting, sickness occur, doubtless in consequence of the extensive sympathies of the uterine system, but disappear without any serious results.

Independently of this special treatment, the application of leeches to the lumbar region will be found useful. In chronic cases, bitters, balsamics, cold baths, particularly sea bathing, preparations of iron, should be prescribed, and moreover, strictly persevered in, without which a permanent cure can scarcely be expected.

As to copaiba and cubebs, they will be utterly useless in this form, and no benefit can accrue from their exhibition except when urethral gonorrhœa is present.

Gonorrhœal Ophthalmia.

Let us now turn to the subject of gonorrhœal ophthalmia. This inflammation, belonging to the non-virulent class of venereal affections, must necessarily remain distinct from the various forms of ophthalmia resulting from syphilitic infection.

Causes.—Like gonorrhœal discharges, it may proceed from the various causes of catarrhal affections; but the circumstance which exerts the most powerful influence over blenorrhagic ophthalmia is, without doubt, the previous or the simultaneous existence in the same subject of urethritis. Is the malady a result of direct contact of the gonorrhœal secretion with the eye, or is it the produce of metastasis? On these points pathologists are at variance, and divided into two classes, each holding exclusive and opposite positions. Absolute truth is with neither. I will endeavour to reconcile their opinions.

The arguments adduced in favor of direct contagion are so strong as to permit us to assert that this is the most frequent origin of the disease. 1. Gonorrhœal ophthalmia is more common in men than in women; and it is a fact of every day observation that the former has more frequent occasion to touch his genital organ. 2. One eye is oftener affected, a circumstance which metastasis or repercussion cannot explain. In the infant, both eyes, because both are equally placed, during parturition, in immediate contact with the stimulus, be it gonorrhœal matter, or be it, what is much more probable, the mere vaginal secretion, increased, and perhaps modified, by labor.

A popular opinion, current amongst the lower orders in this country, that urine constitutes the best wash for sore eyes, is, I feel assured, often the real origin to which gonorrhœal ophthalmia may be traced.

Blenorrhagic secretion, conveyed from one person

to another, has occasionally produced the disease. It is also stated that the pus of bubo, introduced into the eye, will give rise to it. Amongst other cases, the example of Cullerier (senior) is adduced; he is reported to have lost an eye in this manner, from the secretion of a bubo he was in the act of opening being jerked into his eye. No doubt many stimuli may bring on violent inflammations of the organs of vision. Now, supposing that Cullerier had no *personal* motives which might account for gonorrhœal ophthalmia, it is evident that the pus of the bubo must have acted here as a common irritant, and not as a virulent specific.

As to the *gaseous emanations* from gonorrhœal matter, supposed by a Belgian physician to be capable of producing the ophthalmia, the assertion is, to say the least, gratuitous, and appears to us as undeserving of credit, as it is unsupported by facts.

The secretion of urethral gonorrhœa must contain pus, in order to possess contagious properties. This is true for the eyes as well as for other organs. I have never heard of a case, much less seen one, in which the ocular inflammation occurred after the genital secretion had returned to the state of gleet. Is it not surprising that such trifling mucous runnings should be deemed of so dire a nature by the very men who take into no account far more abundant discharges in females, attributing them constantly to leucorrhœa, and utero-vaginal catarrh?

Although direct contagion is really the most frequent cause of the disease of the eye, yet other instances occur in which it cannot be traced to the same origin. In those cases the patient is invariably one who is subject to catarrhal and rheumatic affections, and here *both* eyes are usually occupied by the inflammation. In fact, the genital gonorrhœa acts merely as a stimulus, which brings into action the rheumatic or catarrhal predisposition, and may, with equal facility, bring on arthritis or ophthalmia, without being in the least a specific agent.

As to the much debated question of metastasis or repercussion, I must say I have never seen the urethritis stop suddenly, and the ophthalmia afterwards appear; but, in accordance with the known laws of revulsion, the urethral inflammation gives way after the manifestations of ophthalmia, and in proportion to the gradual increase of the ocular symptoms.

Gonorrhœal ophthalmia, generally depending on contagion, as I have stated, affects one eye only; whereas the other form, due to a catarrhal habit, invades both. But it is far from uncommon to see the contagious variety pass from one eye to the other, and mostly from the secretion of the diseased eye running into the healthy one, over the bridge of the nose, from the circumstance of its lowness, and also the position which such patients assume—viz., lateral decubitus on the healthy side. Sympathy may also cause the inflammation of the second eye, in which case it is less severely affected. It is not, by any means, proved that one eye is more subject to the disease than the other.

Symptoms.—The inflammation may be partial or general. It usually begins on the lower lid, or the inferior half of the mucous covering of the eye-ball. Injection of the large conjunctival vessels, a certain degree of dryness and heat, are the incipient symp-

toms. The tears, hot and burning, occasionally excoriate the cheek. The follicles of the lids or ocular conjunctiva may participate in the disease, and the tumefaction of the membrane appears uneven and granular; though I must say I consider it is carrying exaggeration much too far to compare these small granulations to peas. Very shortly muco-pus is secreted. Fever may be absent throughout the malady, but I have seen it intense, and attended with obstinate vomiting. If I may trust my own experience, I am inclined to believe fever less common in gonorrhœal ophthalmia produced by direct contact of blenorrhagic matter with the eye, than in that form which is more specially influenced by a catarrhal habit.

Some cases are accompanied with very little pain. In most, however, the sense of a foreign body incarcerated within the eyelids, heat of the eye, increased irritability to light, rapidly acquire a high degree of intensity, and the morbid secretion soon becomes analogous to that of urethritis and of other catarrhal inflammations.

The submucous cellular tissue soon becomes oedematous, and chemosis occurs. The upper eyelid, containing more lax cellular tissue than the inferior, is rapidly distended and covers it up, occasionally turning in the lashes so as to produce trichiasis—a dangerous complication, particularly in infants. The eye may then be truly compared to an abscess, the secretion of which is imprisoned between the lids and the eyeball, by the spasmodic contraction of the orbicularis palpebrarum. Instead of œdema, pus may be infiltrated under the conjunctiva. The swelling of the lids is less considerable, and extroversion of the lower lid now and then observed. Phlegmonous chemosis surrounds the cornea, and binds it in an iron-like frame, so as to produce its mortification from pressure.

Abscess of the lids is far from being uncommon. The inflammation may extend deeper; and the cornea, changing its natural color for a grey, opaline yellow, or brownish hue, becomes softened and perforated. The iris may partake in the malady, or the totality of the eye be destroyed by universal suppuration. Again, the eye may be lost by passive mortification of the cornea, or by ulceration of its surface, which have nothing whatever in common with syphilitic sores. When the disease is influenced by a catarrho-rheumatic habit, it is not rare to meet with an increase in the secretion of aqueous humor and consequent hydrophthalmia. Erysipelas of the face is also a frequent complication.

Gonorrhœal ophthalmia may terminate in detrescence, resolution, or loss of the eye. Some years since this was the usual fatal termination of the disease, so much so that during the four years I was attached to Dupuytren's wards as *interne*, I do not recollect one solitary instance in which the organ of vision was not sacrificed. The progress of the disease is very rapid. Sometimes in one, two, or three days it has arrived at a fatal close; this should be well borne in mind, when treating such cases, so as not to lose an instant in useless theoretical debate, or in timid hesitation, but to resort immediately to the most energetic measures likely to arrest the pernicious tendencies of the malady.

Diagnosis.—The violence of the inflammation has in itself nothing peculiar to this form of ophthalmia. Neither do I attach to the presence of granulations any particular value. They may be found in simple inflammations of the eye. As to the color of that organ, compared by authors to brick-dust, ham, cinnabar, &c., it is utterly incapable of giving any positive information of the nature of the case. The quality and color of the muco-purulent discharge is not more characteristic than its smell.

One circumstance alone, although it does not afford incontrovertible evidence of the gonorrhœal nature of the ophthalmia, must be taken into very serious consideration. I allude to the pre-existence or co-existence of urethral gonorrhœa. Recollect besides, Gentlemen, that it is far safer to take simple ophthalmia for gonorrhœal inflammation of the eye, than to commit the contrary mistake. Guide yourselves, therefore, upon this principle, otherwise you may happen to discover your error when it is too late to retrieve it.

The Prognosis was formerly very unfavorable. The results of modern practice are less sad; for twelve years I have met with a vast number of cases, and in one only have I been unsuccessful in saving the eye, and this was merely due—I make the acknowledgment to show you the dangers of hesitation in this most rapid of diseases—this was merely due to a momentary doubt on the nature of the ophthalmia, at its incipient stage, when I was weak enough to delay the energetic measures which might have preserved the eye, and which did eventually save the second eye from destruction. Cases of contagion are more severe than the catarrho-rheumatic form. The prognosis must be very guarded in children, and more so again when the physician's advice is sought for at an advanced period of the disease.

Treatment.—Antiphlogistic treatment alone is insufficient, whatever be the degree of vigor with which it may be handled. Revulsives, baths, blisters, setons, are useful assistants, but cannot constitute a method of treatment applicable to all cases or all periods. Mercury I have no reliance on. Copaiva and cubebs are worse than useless, and irritation of the urethra to induce the return of the discharge I characterise as a dangerous absurdity.

Prophylaxis.—Every patient affected with gonorrhœa must be forewarned of the danger attending contact of the purulent matter with the eye, and the strictest attention to cleanliness recommended. Sleeping in the same bed with a person affected with gonorrhœal ophthalmia must be prohibited. I have observed a case in which contagion was due to pillows stained by the muco-purulent secretion of the eye of another person. As to the repercussion of urethral gonorrhœa, far from fearing it, it is my wish to establish as a principle that the sooner the genital gonorrhœa is arrested, the less will the patient be exposed to gonorrhœal ophthalmia. This you will soon be convinced of, if you reflect that it is never during the first days of the existence of urethritis that ophthalmia supervenes. Here, therefore, is an additional reason for the application, as often as possible, of the abortive treatment to urethritis.

Therapeutic Treatment.—I will begin this part of my subject with what I conceive to be the most im-

portant portion of the treatment, without, however, any disparagement of the other methods, which certainly yield very powerful assistance, and which should, therefore, not by any means be neglected. The diseased parts of the eye must be touched with lunar caustic. The nitrate of silver may be used in solution, in powder, or in a solid pencil. The solution is undoubtedly the easiest of applications. I occasionally use it in the following proportions:—

Nitrate of silver, half a drachm;
Distilled water, two drachms.

It is open to this objection, that its action is not limited to the diseased parts, but extends likewise to those which have remained healthy. In infants or refractory adults it is, however, a great resource.

The powder can only be applied in a very unequal manner. I confine its use almost altogether to ulcers of the cornea.

To both, I prefer by far the solid pencil. The inferior lid is first turned down, and the pencil carried lightly over it, so as to whiten its surface; for the upper eyelid the same operation is repeated, and such spots of the ocular conjunctiva as happen to be affected must also be touched, but never the cornea. To protect its transparency oil has been recommended, but this liquid, running over the other parts of the eye, prevents the proper application of the caustic. An injection of water is made immediately after, so as to wash away those portions of nitrate of silver which have remained uncombined. After a first application, should the swelling and pain not be diminished, and the secretions not become thinner, more sanious, and less abundant, a second cauterisation must be made, and this four, five, or six hours after the first. It should be renewed a third, and even a fourth time, at twenty-four hours interval, until diminution of the symptoms is observed.

Oedema of the conjunctiva, producing moderate chemosis, may be left to itself, but, if considerable, the late Professor Sanson's advice should be attended to, and the chemosis excised—an operation which should follow, and not precede, cauterisation, in order that the action of the lunar caustic be not interfered with by hæmorrhage.

As to purulent chemosis, I recommend, with Scarpa, free scarification of the phlegmonous swelling.

Although I give unbounded praise to nitrate of silver in all stages of this disease, yet I would not have you believe that I rest upon it exclusively. I derive most powerful assistance from blood-letting, abundant and repeated, both with the lancet and with leeches to the temples, and in the course of the jugular vein, frequent lotions of the eye with a decoction of poppy heads (tepid), neutral salts, as revulsives on the intestinal tube, foot baths, the elevated position of the head, and frictions around the orbit, and in the nares on the affected side, with extract of belladonna, the best sedative in affections of the eye. M. Suhr combines extract of belladonna with an equal quantity of the strong mercurial ointment, and obtains excellent results. Blisters and setons may be advantageously employed after the acute period has gone by. Lastly, I would recommend promptitude and decision in the application of this treatment; it has never failed me but once in

the course of many years' practice, and that was the case I have mentioned to you, in which the deceptive mildness of the symptoms was the cause of a fatal hesitation.

ON
ISOLATED OSSIFICATION,
AS CONSISTENT WITH THE VIEW THAT BONE ONLY
PRODUCES BONE.
By T. WILKINSON KING.

In an account of the mode in which fracture is repaired, I have objected to the opinion that isolated commencements of ossification are commonly concerned in the reunion, and my objection has been complained of by some critics, though more in reference to words than philosophy. My chief reason, however, for throwing together the following observations, is the wish to confirm and extend as well as facilitate the conclusions I have formerly advanced.

Speaking of independent ossification, I stated*—"Every museum contains the alleged proofs of these facts; but I may safely ask—where is the collection in which we may find a series of specimens to establish the spontaneous and independent commencement of bony callus—the successive stages of irregular or accidental callus? The formation of all bones, by initiative points of ossification, follows peculiar laws, and it is not impossible that the same laws are to be seen in operation in other instances, but the ordinary rule of repairing fracture is parallel to the growth, and not to the commencement of bone; it is *bone upon bone* wherever increased nutrition or inflammation is excited."

The reviewer in the "Medico-Chirurgical Review" has objected to this, and I may admit that the challenge was not offered without a conviction that it was unanswerable, nor without some confidence that there remained more to be said on my own side of the question.

It is my intention to advert to a variety of little facts in physiology and pathology which explain the occasional appearance of new and detached points of ossification, and the first that I offer is in a manner a pattern of the whole. Cheselden has depicted on the authority of Nicol, an ingenious physician of his own time, the margin of a fetal os frontis in which the bony radiations are bounded by numerous little isolated ossifications. Now the question is, whether these rough points arose in the energy of growth from original centres, or whether the modelling process of absorption, everywhere in progress at this time, may not have divided the radii, and have left these points to proceed for awhile as independent bones.

I admit that the reply must be doubtful, but I shall assume for the present that the latter explanation is the correct one. The appearance described is probably rare. The existence of ossa triquetra, or wormian bones, is probably explained by Dr. Nicol's fact. These supernumeraries are sometimes excessive in the expanded skulls of old and settled hydrocephalus. In severer forms of hydrocephalus we find a curious process causing the isolation of bony spots; for the unequal form of the skull renders certain parts of it

most of all subject to the internal pressure, and these may lose all traces of bone, and may be found entirely membranous. Absorption may thus divide the calvarium into countless misshapen parts, and still it is apparent that ossification is either not arrested, or that it is renewed at intervals to a very considerable extent. It is still more a support to my first assumption, that in young examples of hydrocephalus the radiating margins of the flat bones are to be found peculiarly expanded and attenuated, and presenting every variety of little bones between a single divided radiation and massive ossa triquetra.

An ossification in the falx major is, I conclude, of the nature of true bone, and an example of energetic development of bone, as pisiform bones in unusual situations (the back of the hand, &c.), and the ossification of soft union following divided tendon, or that in the stylo-hyoid ligament, &c.

A very prominent mesian spine within the os frontis is sometimes met with, and it is remarkable that all the varieties of bone in the falx are of limited extent, which also distinguishes them from exostosis and active disease. They may even have begun an union with frontal radii.

It is, I think, common enough to find a sudden periostitis, with fluid effusion separating the bone and its covering to a considerable extent, leading to necrosis. Now, all around this severe disorganisation, a more limited degree of inflammation may have deposited a circle of bone (upon bone) beneath the periosteum. But, perhaps, in the centre of the detached periosteum there may be a patch of isolated ossification, the cause of which it may seem difficult to explain; but if, on further examination, the patch be found to correspond to a solitary worm-eaten spot on the surface of the denuded bone, might we not suppose that ulceration had detached a scale of old or new, which, by adhering to the periosteum, continued to form a nidus of ossific deposit. This explanation may safely admit of a farther refinement, for we may readily conceive the abrupt separation of periosteum with incipient ossifications in a similar manner.

Something similar to this last effect may be met with after amputation. A new shell grows rather unequally around the cut end of the bone, and a little tubular necrosis of old bone takes place within. Ulceration separates the dead bone from the living, and, at the same time, perhaps the excessive new ossification begins to waste, and absorption may detach two or three of its knobs from the shaft, although their nutrition is still in part kept up by their own periosteal envelopes.

I have described the lamellar and needle-like radii of some bony fungi in the history of callus before referred to. I am quite aware that these ossifications are not invariably found attached to the original bone, but my opinion is that when they are detached the result is produced by the lateral pressure of soft growth causing absorption and division of the needles, while ossification may still proceed at their summits.

The ivory exostosis of the face, which ultimately sloughs away, I think I have seen beginning by a narrow peduncle of bone which connects it to primary bone, and I see no reason to deny that the knob, being detached, partial concentric layers of bone may be deposited for a time. It is not, perhaps, sur-