III

GONORRHŒA*


Mr. CHAIRMAN, LADIES AND GENTLEMEN,

A week ago I prefaced an address on gonorrhœa which I gave in the home of my old University with a tribute to the teaching of two great masters in Medicine and Surgery at whose feet I had the privilege of sitting nearly thirty years ago. My tribute was, I think, appropriate to a discussion on gonorrhœa, so I may perhaps be pardoned for repeating some of it. By observation of his methods I learnt from Sir William Gairdner that the shortest cut to a diagnosis is often the longest way round; that, in fact, the labour of examination and re-examination are well repaid. I shall try to underline this teaching in my remarks on gonorrhœa. From Sir William Macewen I learnt that accepted practice is not necessarily right in principle.

One could give many examples of this, but I will take the liberty of citing one which, though it has no direct bearing on gonorrhœa, may perhaps interest you as syphilologists. Some time ago I lay in bed wondering what I had done to deserve a toothache which was keeping me more than awake. I had practised regularly the dental toilet in which I had been drilled in my youth, using dentifrices approved by my dentist, and my diligence seemed to have been rewarded most scurvily. The toothache lasted long enough, however, for me to arrive at the conclusion that I thoroughly deserved it for following accepted practice without stopping to think if it conformed with our knowledge of germs and their destruction. Like many millions of others, my toothbrush with its bristles all covered with germs went back after use into the article of toilet-ware designed for its reception. Like many millions of other people, duly and at regular intervals I practised an inoculation

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of my gums with those germs, blindly trusting to the counter-effect of a modicum of weak antiseptic contained in some millionaire manufacturer's dentifrice, diluted heavily with saliva and water, and applied momentarily. I wonder how many bacteriologists and experts in germicides do the same thing, and how much less pyorrhoea there would be if people stopped to think that the accepted practice of dental toilet is not necessarily right. My example may seem far from the subject of gonorrhoea, but the principle touches it closely, because I have had good reason in the many years during which I have been interested in this subject to be thankful that I have made a habit of weighing up every recommended method of diagnosis or treatment to determine whether or not it is sound in principle. The habit led me early to discard much which was commonly practised when I first treated gonorrhoea, but is now happily giving place to more scientific methods.

I regret that I allowed myself to be nominated as opener of this discussion, because I feel I have nothing new to say on the subject of gonorrhoea, and time might much better have been spent in listening to someone who could suggest to you better than I can new lines of investigation. I can only, in a rather discursive way, attempt to take stock of the situation, saying my creed as I go along in the hope that some of my remarks may provoke discussion.

To commence with diagnosis, I would particularly emphasise that labour spent in acquiring the clearest possible knowledge of the patient's condition is, as in other diseases, labour which is well repaid. First, in the case of both sexes, come the laboratory procedures to determine the nature of the infection. Those who neglect a microscopic examination of the secretion quite often go on treating for weeks a non-gonococcal infection with potassium permanganate or with one of the endless variety of silver preparations which, in my judgment, are useless against such organisms as *B. coli*, streptococci, staphylococci, and/or diphtheroids. Again, they sometimes accuse a patient suffering from *B. coli* epididymitis of moral turpitude and thereby bring themselves into disrepute. On the other hand, we have the danger from reliance on naked-eye appearances of overlooking a gonococcal infection. The most striking example of
this is the case of a woman who shows no sign of pathological discharge, but in whose cervical or urethral secretion scraped from the walls of the canal can be seen multitudes of gonococci without a pus cell.

There are differences of opinion as to the value of cultures in the diagnosis of gonorrhoea. Personally I think them indispensable in the case of women, and often valuable in male urethritis. Apart from the fact that in the case of specimens from women gonococci may not be found in the slide but grow in the culture, there are plenty of cases in which equivocal organisms are seen in slides, and a diagnosis of their nature could not be made without culture. The phrase "Gram-negative diplococci, indistinguishable from the gonococcus," must be familiar to all of you in reports on slides, but I do not remember to have seen such an unsatisfactory report on a culture. I have seen a report that gonococci were present in a slide from a case of vulvo-vaginitis, which was later found to be due solely to a hairpin within the vagina, and I have seen more than one report that a slide contained those Gram-negative, indistinguishable diplococci, and later found that numerous natural implantations of the patient’s secretion on her husband’s urethra had failed to produce a flicker of inflammation. It is often said that cultural work is impracticable in clinics, because of the difficulty of getting the culture to a laboratory quickly. The difficulty can be overcome in most cases by having in the centre a small incubator in which the cultures can remain until it is convenient to transport them. Of course the art of planting must be learnt, but this is easy enough.

Whilst on the subject of laboratory examinations it is necessary to speak of the complement fixation test, about which there is considerable difference of opinion. Although I do not think the gonococcal complement fixation test so reliable or useful as is the W.T. in syphilis, I regard it as valuable, and it is carried out as a matter of routine in the case of all the female and many of the male patients attending my clinic. On occasion a positive reaction has been the only indication that a gonococcal infection has not been eradicated. Sometimes I have known it remain positive for as long as three months whilst slides and cultures were negative, but eventually it has been proved to be right by the discovery of gono
gonococci in the secretion. Everybody who has had the care of gonococcal cases tell of cases in which the gonococci remained locked up for months, e.g., in the prostate or in a para-urethral canal. Slides and cultures in such cases may easily be negative, but a positive complement fixation reaction may save one from pronouncing out of hand that the patients are cured.

As to topical diagnosis, I am not greatly concerned in the acute stages of gonorrhoea to determine whether or not a patient has posterior as well as anterior urethritis. It does not affect the general lines of my treatment, because I believe in washing the whole urethra with mild lotion from the first. But it surprises me to see those who limit the local treatment to the anterior urethra until they consider the posterior urethra affected, relying for a diagnosis of commencing posterior urethritis on a two-glass test. Only a little thought would convince one that when the posterior urethra commences to secrete pus, all of it must be washed into the first glass, and that by the time the second glass shows signs of posterior urethritis the disease is well implanted there.

For myself, it is mostly in the later stages of gonorrhoea, when the urethritis is manifested only by a mild gleet and a few threads in an otherwise clear urine, that I think no amount of labour too great to discover whether or not the posterior urethra is still infected. For this purpose I regard the two-glass test as quite unreliable, since a thread or two in the posterior urethra must be washed into the first glass. I get the patient to come in the morning before he has passed any urine and wash out his anterior urethra with at least two pints of solution by means of a special back-flow irrigating tube. If he passes a clear urine, with no pus in the centrifugalised deposit, I repeat the test two or three times to make quite sure that the posterior urethra is not affected. In addition I test the prostatic secretion; but here again I think it well to make certain that the urethra has been thoroughly cleansed before sending the prostatic secretion along it, otherwise one may easily accuse the prostate of being infected on the score of pus which its secretion has picked up in the urethra.

Next, I would urge the value of the urethroscope in diagnosis. I have been told that only those with plenty
of imagination see anything through the urethroscope, and I have read that such instruments should be on the dust-heap. I can reply only by asking how such conditions as what some call sago-grain urethritis can be diagnosed without a urethroscope, or how the condition can be cured quicker than by the use of an electric cautery through the urethroscope. Again, a pouting follicle, or even a bigger collection of pus, below the urethral mucosa can remain undetected for months unless the mucous membrane is actually viewed. To omit the use of the urethroscope seems to me as reactionary as to dispense with the view of the interior of the mouth when a patient complains of trouble in this part of his body. Lastly, on the subject of topical diagnosis, I would emphasise the importance of looking closely for para-urethral canals, which may be a cause of repeated relapses over many years. It has been my good fortune, doubtless like that of many who treat urethritis, to clear up not a few cases of long-standing urethritis by cauterising some trivial-looking para-urethral canal which has hitherto escaped notice. Sometimes a para-urethral canal appears on the surface as a mere dimple, and a fine probe cannot be got to enter it. I have in mind a case in which a patient with hypospadias had such a dimple in the position of the normal meatus, i.e., just dorsal to the hypospadiac opening. He had relapsed repeatedly in other hands and had arthritis. He had also at the normal position of a Tyson’s duct a fistula communicating with his urinary canal, and I thought I had cleared out the infection by cauterising the fistula. He remained free from signs for three months and then relapsed after a urethroscopy. This time I saw a suspicion of moisture at the dimple over the urethral opening. I could not get a probe to pass, but turned on a fine stream of oxygen through a glass capillary pipette, which blew up a canal running dorsal to the urinary canal for some centimetres; it was anatomically the true urethra. The stream of oxygen was a very useful pilot for my electric cautery, which put an end to the relapses.

Time will not permit of my dilating further on the subject of diagnosis, and I must be content with repeating that examination and re-examination, to determine not only the nature of the microbes, if any, responsible for
GONORRHOEA

the inflammation, but also the site or sites of the trouble, are well repaid.

On the subject of treatment I must confine myself largely to principles. One could divide those who treat gonorrhoea into two main classes—those who rely entirely, or almost entirely, on locally applied bactericidal remedies and those who, whilst not denying the value of local treatment, do not believe that there is any bactericidal remedy which can reach down to and destroy the gonococci in the depths of the tissues. These workers seek to cure gonorrhoea by encouraging those processes by which the tissues rid themselves of the infection. I belong to this class, holding that what is called the modern treatment of gonorrhoea is nothing more than the practice of two great surgical principles—(1) to raise the patient’s resistance, and (2) to secure and maintain drainage.

Silver nitrate was formerly the great stand-by in both male and female gonorrhoea, and it is still used by many workers in female gonorrhoea, in strengths which, in my view, only cauterise the surface, converting it into an excellent medium for the growth of secondary organisms and leaving considerable scarring, whilst failing to kill the deeper-lying gonococci. The ineffectiveness of silver nitrate as a complete cure of gonorrhoea is shown by the host of other silver preparations which in the past thirty years or so have been advocated for use in its stead. Recently I had the curiosity to search out the names of silver preparations which have been put on the market, and, with the help of a prominent firm of chemical manufacturers, was able to discover no less than forty-five. Their very number seems to me eloquent testimony to the futility of attempting to reach and destroy the gonococci in the deeper parts of the urethral or cervical mucosa with chemical bactericides containing silver. Like other preparations, such as acriflavine and mercurochrome, they may be useful for destroying gonococci more superficially placed, as in the vagina of children, but I think one must look in other directions for a complete treatment of gonorrhoea in the adult. In this I am in agreement with many workers who, as current literature testifies, are trying to discover indirect methods of assisting the tissues to eliminate the gonococci. One can divide these workers into two main classes—those who
seek by chemical action on the tissues to make them an unfavourable medium for the growth of gonococci, and those whose primary object is to stimulate the formation of anti-gonococcal substances. In the first of these are workers who, like Holzbach, apply scarlet-red to the urethra in the hope of stimulating the growth of resistant epithelium, and those who inject intravenously such remedies as the flavine compounds or mercurochron-e. As to the value of scarlet-red applications I have no experience. I am rather afraid of mercurochrome, since I had a very severe case of mercurial colitis in my clinic following a comparatively small dose. Treatment by intravenous injections of acriflavine was introduced by Browdy in 1921 and later taken up by Harty and Frost. Recently Jausion and Vaucel have claimed good results from intravenous injections of flavine compounds, and incidentally have claimed also that they are the discoverers of the method. Skutesky also reports brilliant results from the use of trypaflavine intravenously. Judging by a series of cases now under this form of treatment in my clinic, I am inclined to think that, in conjunction with local treatment, it is a distinct help, but the results so far obtained have not been magical.

I should like now to discuss treatment on the principle of stimulating the formation of anti-body. For the purpose have been advocated vaccines and protein-shock-producing remedies, such as milk, electrargol, autolysate of B. pyocyaneus, ichthyl, glucose, and so forth. Some workers believe that vaccines have a specific value, and some think that any good they effect is by virtue only of their protein-shock effects. As members of this society know well, the whole subject is one on which hours could be spent in discussion without arriving at any very well-defined conclusion, and I must content myself with an expression of my own views. I have always held that there is somewhere in some cultured strains of gonococci the means of raising the patient's resistance a degree sufficient to bring about the elimination of the infecting organisms. I base this view on my experience of cases in which almost brilliant results have followed on the use of a gonococcal vaccine. Such cases have seemed to occur in series followed by series in which it seemed doubtful if the vaccine was effecting any good purpose.

In a discussion on the vaccine therapy of gonococcal
GONORRHÖEA

infections held by the M.S.S.V.D. last year I expressed a hope that a systematic search might be instituted to discover what factor, whether strain or method of treatment of the cultivated organism, or dosage, was responsible for the good results. I am glad—though I cannot claim to have stimulated it—that such an investigation is in progress at a large military hospital, and the results so far obtained indicate that gonococci can be divided into good and bad immunisers, and that from the good immunisers, which comprise only about a third of isolated strains, can be split off a fraction which is antigenic but not toxic. I am glad that Major Lambkin is here to tell us more of this new method of vaccine therapy. I have mentioned it to show that the problem of the best form of vaccine therapy is not the blank wall which current literature would lead one to believe; that for the groping in the dark in this field may soon be substituted exactly scientific investigation of the antigenic value of chemically defined different compounds of the gonococcus.

On the value of protein-shock therapy in gonococcal infections, I can say only that it is certainly useful in complications, but that here, as in vaccines, we have still much to learn as to the preparations and their dosage which give the best results. At St. Thomas's Hospital we have used chiefly electrargol and milk. Our results with milk in combination with vaccine have not been so good as those claimed by Tansard, but possibly the milk we used was not so full of bacteria as Tansard's; and I propose now to try the addition of B. coli to the milk, basing this on the Viennese observation that the dirtier the milk the better it seems to act.

Within the past few years the treatment of gonorrhöea by diathermy has been revived, very largely owing to the work of Cumberbatch and Robinson and of Maclachlan and Milner. Brilliant results have been claimed for this method of treatment. At the St. Thomas's Hospital centre we have not achieved such rapid cures of gonorrhöea in females, but the results have been sufficiently encouraging to justify our persevering. I do not think we have yet discovered the best method of applying this treatment. For many reasons I do not think it acts by destroying gonococci by heat, but probably by an auto-vaccine effect. In epididymitis and prostatitis we have had many brilliant results, and our experience of the
application of diathermy to the prostate and vesicles in cases of arthritis has confirmed all that Cumberbatch and Robinson claimed for it. In a word, I think that the diathermy machine is a valuable instrument for the treatment of gonococcal infections in many of their manifestations.

I regret the discursive nature of my remarks, but perhaps some of them may have suggested to you matter for discussion.