V

THE PROBLEMS IN THE TREATMENT OF ACUTE GONORRHŒA*

WITH REFERENCE TO THE PREVENTION OF COMPLICATIONS IN (1) MALE (2) FEMALE

By

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INTRODUCTORY

The application of rational treatment to many conditions met with in practice amongst natives in West Africa is hindered more often by difficulties offered by the patients themselves than by the nature of the disease. This is particularly true of gonorrhœa. Problems face the practitioner which, though they have little scientific or therapeutic interest, are nevertheless of considerable local importance. Such problems are to be expected in a country where fetish worship still flourishes and where the power of charms and incantations to ward off disease is the belief of a large proportion of the population.

It is my purpose to describe as best I am able the nature of these difficulties in their bearing on the treatment of acute gonorrhœa.

I cannot contribute anything to the important subject of the prevention of complications, as it is an unfortunate fact that in West Africa the great majority of patients first present themselves for treatment with complications already well established, and practitioners find themselves of necessity more engaged with their cure than their prevention.

THE AFRICAN'S CONCEPTION OF THE DISEASE

Gonorrhœa is widespread in West Africa, but it is more prevalent in the larger towns and districts near the coast. The acute form in which it appears in males is a well-recognised condition, but the African's general conception of the disease has not been based

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on accurate observation. It is necessary to give a brief *résumé* of the views concerning gonorrhœa which are held by the majority of the population.

No description, however brief, would convey the correct impression unless it brought into some relief the striking differences in the attitude of the sexes. Africans do not look on acute gonorrhœa in the male as a serious disease, and it might be true to say that the majority accept it as a more or less normal event in the period of early manhood. But in spite of their philosophic view of its occurrence, they usually realise the need for treatment in the acute stage. The feeling of shame, which is very prominent in civilised communities, is almost absent in the male patient, but is marked in the female. The fact that the disease is acquired and transmitted by the sexual act is well appreciated, although it is not realised how long infectivity may remain, and once the acute discharge has subsided most Africans regard themselves as free. It is difficult to be certain how often African women recognise the disease in its early stages. I am convinced that the great majority do not know that they have been infected and are therefore apt to remain untreated until some painful complication arises. Almost all Africans, believing that they can be cured by native medicine, naturally seek relief from these methods when they realise their condition. Only when this treatment fails to produce the desired results do they turn to the Government hospitals or dispensaries, but even then the women, who are far more conservative than the men, do not always abandon their customary remedies.

It should be added that there is an educated African community whose views on the disease approximate to those held in England. As these constitute only a small proportion of the population, and as the problems presented by their treatment are similar to those met with in Europe, I do not propose to consider them further.

THE AFRICAN'S ATTITUDE TO EUROPEAN METHODS OF TREATMENT

It will be gathered from the above that European treatment of gonorrhœa does not attract the African to any great extent, for it is generally only resorted to when other methods fail.

Let us consider then some of the reasons for this unpopularity of our treatment. Is it possible that Africans themselves possess a cure for gonorrhœa? There is no evidence to support this, and it is most unlikely that a curative of any value would have escaped the notice of a generation of trained observers. Certain herbs are used which might conceivably cause some diminution of the discharge, but the crude methods of preparation employed and the absence of

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any attempt at dose regulation would render problematical whether improvement or injury should take place, even if medicinal properties were really possessed by the substances used.

The apathy with which the African views the European treatment of gonorrhœa may, curiously enough, be partly attributed to the results obtained in treating Yaws. Yaws is still one of the commonest diseases in West Africa, and directly or indirectly is responsible for more than 25 per cent. of the attendances at hospitals or dispensaries in the Gold Coast. It causes crippling and painful lesions in skin, bones and joints and sometimes attacks the epithelial and deeper structures of the naso-pharynx in a particularly destructive manner. Nevertheless, it is easily treated and the effect of Novarsenobillon or bismuth-sodium-tartrate is truly amazing. Extensive ulcers, painful nodes and profuse skin eruptions melt away under the influence of these powerful drugs in a manner which cannot fail to impress both patient and observer. These brilliant results have confused the African's judgment and have produced a profound effect on his faith in our methods of treating many other conditions, including gonorrhœa. The days are past when they merely hoped for some relief from their sufferings, for now they are no longer satisfied with gradual improvement and always expect a dramatic cure. They have also acquired an irritating habit of demanding injections, which they imagine, in their child-like innocence, can be produced to cure every manner of disease that flesh is heir to. It would be misleading to suggest that the results obtained in West Africa with our methods of treating gonorrhœa are encouraging. Generally speaking, they are rather the reverse, and it may well be that the African has already passed judgment. The reasons for our failures must now be analysed.

THE INFLUENCE OF NATIVE MEDICINE

An uneducated African will always turn first to his own native medicine when attacked by sickness. This is a habit which is deeply ingrained in his nature, for it is closely interwoven with other ideas and practices which are collectively referred to as "Native Custom." Fetish practices and the healing art were originally united in the person of the ancestral priest who thus performed a dual function. Both have survived the introduction of Christianity and civilisation. But however dignified its origin may have been and however imposing its associations, the native medicine of to-day does not deserve the respect shown to it. It is most uncommon to meet cases of gonorrhœa that have not been made more difficult to treat owing to the efforts of the native healer. Patients who have indulged in native medicine always seem to have complications, and

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these are frequently so serious that the primary disease may be completely overshadowed. It is indeed surprising how much pain and injury an African will allow himself to suffer from the direct results of native treatment.

The unfortunate urge to try native methods first is a serious handicap for the practitioner, for his chances of achieving a rapid cure are lost and his hopes of ultimate cure are slender. Even when relieved of their complications many patients are likely to believe themselves cured and are then unwilling to undergo further treatment. Were the acute cases of gonorrhœa to present themselves for treatment before they had been meddled with more hopeful results would be obtained and complications would be less evident. Damage is also done to many cases of gonorrhœa by misuse of drugs and appliances sold in the stores. In one part of the Gold Coast a common method used is to inject strong solutions of potassium iodide into the urethra with a syringe, and these instruments are also used to inject various antiseptics and herbal preparations with almost equally disastrous results. Female cases do not appear to favour local applications and are usually treated by medicines given by the mouth. In these patients more damage is done by delay than by direct injury, and when an African woman eventually presents herself for treatment it is fairly certain that the gonococcus has obtained a firm hold and more than probable that complications exist.

THE DISADVANTAGES OF DISPENSARY TREATMENT

The Government dispensaries are established in certain of the smaller towns and are always at some distance from the more important hospital centres. In some parts of the Gold Coast treatment is also given from travelling dispensaries which are equipped in a suitable manner and are able to serve a large area. The function of dispensaries is to offer medical and surgical aid to the people in the vicinity who are unable to visit a hospital. This is provided for by the weekly visit of the Medical Officer who brings such drugs and instruments as are necessary. Between these visits the dispensaries are closed, for there is no permanent staff. It is unfortunate that so many patients present themselves at these outposts when they are suffering from gonorrhœa, for the most sanguine individual could hardly hope for happy results when treating the disease under these discontinuous "bush" conditions. Experience has taught me that most of these cases have simply been attracted by the belief that they can easily be cured by "white-man-medicine" with a few injections. As they are nearly always unable to leave their farms or their families to travel to the nearest hospital, they must be treated locally in the

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dispensaries, or not at all. The Medical Officer is faced with the choice.

To attempt to treat female cases of gonorrhœa in surroundings which make a satisfactory examination impossible and where any form of local application is out of the question except at long intervals, would be to invite failure. For this reason every effort is made to persuade females to attend a hospital and dispensary treatment is necessarily withheld.

Male patients are rather different. Examination is fairly easy, although the findings cannot be immediately checked with the microscope, and the omission of irrigation does not necessarily veto other treatment. Furthermore, it is to be remembered that the male is the least dispensable unit of African family life, and refusal to treat is more likely to condemn him indefinitely to native methods. Only the simplest treatment can be safely applied to the illiterate African attending the dispensaries. A selection of cases with the rejection of the chronic or badly complicated ones is necessary if disappointments and wastage of drugs is to be avoided. Detailed instructions must be given to patients to try to prevent them from transmitting the disease to others or from infecting their own eyes through ignorance of the nature of the discharge. They must also be urged to avoid alcohol and to alter their diet so as to reduce irritants as much as possible. It is wise to give some injection, if only for the purpose of ensuring continued attendance. Using simple alkaline diuretics combined with the injection of such substances as manganese butyrate solution, gonococcal vaccines and intramine, I have noted a gradual cessation of the discharge in a fair number of cases treated. The great drawback to such treatment is the length of time required to produce satisfactory results. Losing hope when the expected improvement fails to follow on two or three injections some of the patients disappear at an early date, and while the majority continue to attend until the discharge has lessened considerably, it is only a small number who have the patience to continue until a cure is effected.

TREATMENT IN HOSPITALS

Treatment in hospitals is carried out on orthodox lines. Irrigation of male patients with antiseptics such as potassium permanganate solution, or dyes such as acriflavine, gives satisfactory results. It is usually possible to admit some cases to the wards, and it is here that the best results are obtained. The vast majority of patients are, however, treated in the out-patient department and attend twice daily. The irrigations are done by male African nurses, who rapidly acquire considerable skill in their performance. Even in the best

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possible circumstances, that is to say with the patient in hospital and progressing satisfactorily, the impatience of the average African soon asserts itself. They voice their dissatisfaction unless they are receiving injections; and as soon as local symptoms diminish they begin to ask for out-patient treatment. Accommodating relatives die at an alarming rate and telegrams pour in from helpful friends to ensure their rapid discharge. Many are lost sight of once they have left the wards, for they consider themselves cured and are anxious to return to their homes. With out-patients there is the same tendency, and in spite of the lure of weekly injections it is extremely difficult to hold the patients until a complete cure has been obtained.

Acute gonorrhœa brings relatively few female patients to hospital. The small number that are seen in the early stages do not realise the nature of their complaint and merely complain of pain or discomfort in the lower abdomen. Females are much more likely to attend when there are complications which cause severe pain or when there is some disturbance of menstrual functions, so that the great majority of cases are first seen when the disease has been present for some time.

Regular douching and swabbing of the cervix, urethra and vaginal crevices rarely fails to alleviate speedily the effects of an acute attack and the patients readily submit to such treatment and at first attend regularly. As female patients require far more individual attention than males, the Medical Officer can often encourage them to persevere even when they have lost all subjective symptoms and even consider themselves cured. The complete sterilisation of the infected cervix is, however, a matter requiring such prolonged treatment that many patients are lost sight of before this has been accomplished.

I have attempted to show that the present treatment of gonorrhœa, both in males and in females, is often a failure because it demands too much from the uneducated African patient. Any method which rapidly modifies the acute symptoms but demands prolonged after-treatment is unsuited to African temperament and liable to produce many failures.

BILHARZIA AND ITS RELATION TO GONORRHŒA

Although bilharzia is endemic over the whole of West Africa, the degree of infestation varies from place to place. While certain areas are heavily parasitised adjacent districts may appear to be practically free. Such an irregular distribution is almost certainly determined by the presence or absence of the intermediate host. The disease is almost always due to *Schistosoma hæmatobium*. The sister parasite,

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S. mansonii, is only occasionally met with. In the circumscribed hyperendemic areas a large proportion of the population are infected at an early age, and pathological changes are thus produced in those very regions of the body which may be further damaged by the gonococcus at a later date.

Bilharzia may sometimes closely simulate gonorrhœa. Occasionally a urethritis is the only symptom and with local pain during micturition and visible pyuria, a mistaken diagnosis may result. In females, who often volunteer the erroneous information that they are suffering from gonorrhœa, the appearance of the urethra and cervix may be very deceptive. In infected areas a microscopic examination of the urine in every suspected case of gonorrhœa is the only satisfactory way of avoiding mistakes.

The most difficult problems are presented by those cases where a double infection is suspected because the presence of the trematode may be entirely masked. When the bladder has been secondarily involved it is frequently impossible to find ova in the purulent urinary deposit, and as instrumentation is usually contraindicated, a cystoscopic examination must be postponed. In such circumstances a reliable history would be of the greatest value, for the previous occurrence of hæmaturia would indicate the need for injections of antimony. Such help is not always forthcoming, and then the practitioner must rely on clinical observation and on his knowledge of local conditions.

The presence of bilharzia also affects the course and treatment of gonorrhœa in both sexes. Cystitis is an unusually frequent complication, and in untreated cases rapidly becomes the dominant symptom. The "two glass test" is no longer reliable when bilharzia is present, so that it is often difficult to be certain if the gonococcus has invaded the posterior urethra. In every patient where infection is thought to be limited to the anterior urethra, a full course of antimony injections is indicated, and it appears wise to withhold posterior injections for as long as possible. Even with these precautions cystitis very often supervenes, and when this occurs bladder washouts are always required before improvement is obtained. The washouts are at first performed merely by passing the irrigating solution back into the bladder, but later on it is often an advantage to facilitate the procedure by using a soft rubber catheter. In female patients the occurrence of a cystitis is a still more frequent happening. Bladder washouts are performed with a two-way catheter and the other treatment is simultaneously carried out. The difficulty of giving antimony intravenously to patients with poorly developed veins can now be overcome by using the new intramuscular injection known as "Fouadin." No facilities exist in the Gold

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Coast for performing complement fixation tests in suspected schistosomiasis.

In acute cases of gonorrhœa complicated by bilharzia, even when cystitis supervenes, the final results compare very favourably with those obtained in treating simple gonorrhœa, except that there always remains some appreciable diminution of bladder capacity.

COMPLICATIONS

While the varied complications of acute gonorrhœa occur considerably more often and also differ somewhat in their relative frequency as compared with England, there are none of them peculiar to African patients. I have already commented on the increased frequency of cystitis in bilharzial districts, and there appears to be little chance of hoping to reduce this, other than by curative or preventive measures against one or other disease. With the possible exception of Yaws, there is no other tropical disease which has much influence on gonorrhœa. Yaws may be one of the factors which accounts for the excessive occurrence of joint pains in acute gonorrhœa, and also for the remarkable frequency with which true gonococcal arthritis complicates the disease in all stages and in both sexes. In African patients suffering from acute gonorrhœa, arthralgia is sufficiently prominent to make it the initial symptom complained of in a large proportion of cases. True gonococcal arthritis is a prolonged ailment exactly similar to that found in England, except that it appears to react so favourably to Novarsenobillon that this drug has become a reliable standby, and when combined with treatment of the existing primary focus, it may be relied upon in many cases to shorten the course and to reduce the severity of the disease. It is well known that arthralgia is one of the commonest manifestations of latent or tertiary yaws, and it is therefore possible that some of the joint pains in gonorrhœa are merely caused by a reawakening of the first mentioned disease. The suggestion that Yaws plays some part in the excessive incidence of true gonococcal arthritis is supported by the fact that Novarsenobillon has such a powerful alleviating effect. The routine taking of blood for the Wassermann test in all cases of gonorrhœa in West Africa would give the clue to those cases which would be benefited by anti-yaw treatment, and the early use of the drug might spare a number of potential sufferers from this common complication.

With educated patients gonococcal conjunctivitis is a rare complication. It is, however, quite a common happening for an African patient to infect his eyes, even though he has been carefully warned of the danger of transferring infection with his fingers. Many

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neglected cases present themselves with both eyes permanently injured, and from their accounts it is clear that they do not connect the conjunctivitis with the existing gonorrhœa. One would think that the most effective method of combating the incidence of this complication would be to educate the African community to the dangers of the primary disease, but even with patients attending hospital the warnings given at the commencement of treatment do not always suffice. Although employed usefully in maternity work, it would be a costly and wasteful business to give daily prophylactic instillations of a silver compound to every patient treated.

In Europe, vaginitis is seen when the disease attacks female children and also, much more rarely, in adult patients. The frequency of debilitating illnesses, such as malaria, tuberculosis and dysentery, renders the adult African woman prone to develop this condition when infected with the gonococcus. When present the whole vulva becomes swollen and tender, and an adequate examination becomes impossible until sedative baths and gentle douching have reduced the inflammatory reaction. Thus, the presence of this complication not only delays essential treatment, but also indicates the need for a general examination and treatment of any contributing factors found. *Bilharzia* alone may directly injure the vagina; but only occasionally. When gonorrhœa follows on this infection the otherwise resistant vaginal mucous membrane is much more likely to prove a "*locus minoris resistentis*" and a true gonococcal vaginitis often supervenes.

It has been my intention to dwell on the complications of gonorrhœa solely for comparison with those met with in England. The commoner ones, such as posterior urethritis, prostatitis and epididymitis in the male, and salpingitis, metritis and Bartholinitis in the female, are all much more frequent but differ in no other way.

I had the opportunity of comparing the relative frequency of certain complications in patients treated in this country with and without irrigation. Ten prisoners from the local prison suffering from acute uncomplicated gonorrhœa were treated with alkaline diuretics and intramine injections. The results were compared with those obtained in treating thirteen hospital patients with irrigations, other treatment being similar. The average time required to clear up the discharge was much longer in the prisoners, two in fact being released at two and a half and three months respectively before this was accomplished, but of the ten treated only two developed a posterior urethritis and there was no case of epididymitis. In the second group of thirteen hospital patients, who were treated over the same period, four developed a posterior urethritis and two further patients developed this complication with an epididymitis.

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Epididymitis may appear so soon after irrigation is commenced as to leave little doubt that the treatment is responsible.

Although reasonable care is taken to avoid premature posterior irrigation and also the routine of carefully washing out the anterior urethra before the solution is ever allowed to pass back into the bladder is rigidly maintained, it is still probable that further supervision by the Medical Officer would reduce the casualties, but the results given are fairly representative of those obtained in the busy Government hospitals where most of the treatment must be carried out by African nurses.

DIFFICULTIES CAUSED BY AFRICAN CUSTOMS AND DIET

In conclusion, I should like to indicate two minor factors which occasionally influence treatment, namely, marriage and diet. It might be thought that polygamy would cause innumerable difficulties, but in point of fact, these do not occur because it is, as a rule, restricted to male Africans of an age when the disease is rarely contracted. The moral standard of many of the younger generation is not high and promiscuity is common. It becomes, therefore, a matter of anxiety to the practitioner to prevent patients from spreading the disease during treatment or from acquiring a reinfection.

The African, like most tropical peoples, is extremely fond of condiments. Peppers are an important ingredient in the diet, and few dishes are relished unless they are liberally seasoned with them. In spite of the warnings that these seasonings are likely to interfere with treatment, it has been my experience that the great majority of patients refuse to depart from their customary diet. Palm wine and gin are also sometimes consumed by both sexes. There are also various African ceremonies in which the consumption of alcohol takes place, and it would be impolite for a guest not to partake. As funeral customs and other similar occasions are fairly frequent, the progress of many a promising case is often seriously interrupted.

CONCLUSIONS

The modern complicated methods of treating gonorrhœa in males and females, designed primarily for the treatment of highly civilised patients, cannot be practised amongst uneducated African patients without serious loss of efficiency.

It is unlikely that the numerous difficulties at present interfering with the efficient treatment of the disease in West Africa will be overcome, except by the discovery of a specific drug which will destroy the gonococcus locally in the same manner as Ehrlich's salvarsan destroys the spirochætes of syphilis and yaws.

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Pending the introduction of this ideal curative, adaptation of our present methods is necessary in order to allow for local conditions and the peculiarities of the African temperament.

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