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VENEREAL DISEASES IN THE MERCANTILE MARINE *

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ANTI-VENEREAL organisation includes social measures for prevention and measures for treatment of the infected. I propose to confine myself to the second of these in the hope that some definite recommendations may evolve from the discussion which may help to place this important section on a more practical basis than exists at present.

An essential part of every scheme for the eradication of venereal disease from a community is full provision for treatment of the infected individuals of that community. This is well recognised in the case of landsmen by the liberal provision in all progressive countries of facilities for treatment. It is recognised in the case of seamen by the Belgian Agreement, which provides for free treatment of men of the Mercantile Marine of any nationality at the cost of the country in which they happen to be.

But the Belgian Agreement is not by any means the complete solution of the problem of bringing and keeping under treatment the infected members of the Mercantile Marine. Only a comparatively small number of countries have signed the Agreement and none of those which have done so could claim that every seaman landing at any of its ports could receive adequate treatment. At many ports there is no treatment centre and at others where there is one the hours of sessions are so limited that probably many seamen cannot during their stay at the port avail themselves of the treatment provided. Undoubtedly when most of the countries in which seamen land have made full provision for their treatment a great advance will have been made towards the solution of this problem, but even then there will remain a considerable section of the mercantile marine who cannot obtain adequate treatment except at the great pecuniary

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sacrifice entailed by long periods of unemployment, unless something more is done.

It is unfortunate that most discussions on the problem of treating venereal diseases in the mercantile marine take place before mixed lay and medical audiences. The consequence is that the discussion is too diffuse, and no concrete proposals for the solution of the medical problem eventuate. In my view no progress will be made until a medical committee has discussed the subject thoroughly and laid down the requirements in such a form that the executive laity can see clearly what is necessary and can then decide their line of action. The present paper is intended as a basis of discussion by such a medical committee.

It is commonly forgotten that the requirements in medicine and local applications for the eradication of venereal disease from a seaman and from a landsman are identical and in no way affected by the difficulties of meeting them in the case of the seaman. The evidence of this oversight is that the treatment programme set out for the seaman is usually something less than in the case of the landsman, almost as if the person responsible for the formulation of such a programme had been actuated subconsciously by a feeling that the germs of these diseases would recognise the difficulties and consent to accept defeat under a less perfect attack in the case of a seaman than in that of a landsman.

I suggest that an agreement should be reached on minimal requirements for the eradication of venereal disease from the individual and that then, after discussion, the best ways and means of meeting these requirements in the different circumstances of seafaring life should be formulated.

I would propose the following as minimal requirements:—

EARLY SYPHILIS

(1) A certain diagnosis based on bacteriological as well as clinical evidence is essential in all early cases. The bacteriological evidence is microscopical in the first place, and failing this (or in addition to it), serological. The commencement of treatment of early cases on mere suspicion is a pernicious practice which leads to untold trouble and should be condemned.

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(2) The treatment requires the administration of arsenobenzene supplemented by mercury or bismuth over a minimum period of one and a half to two years. In the case of a landsman the arsenobenzene is commonly given in courses of weekly injections, each course lasting ten to twelve weeks, with intervals between courses of about two months. The mercury or bismuth is given in such a way that practically throughout the whole period of treatment one or other of these metals is present in the patient's tissues in sufficient concentration. This is effected—

(a) By giving intramuscular injections of insoluble preparations of mercury or bismuth in such a dosage that throughout the intervals between courses of injections the metal continues to be absorbed, or

(b) By giving mercury by mouth throughout the whole period of treatment, or

(c) By a combination of both methods.

This method of attack on the germ of syphilis is not usually practicable in the case of the seaman because it would require his staying ashore for periods that are too long. The question arises whether it can be varied to suit the peculiar circumstances of the seaman without loss of effectiveness. I think it can and suggest for discussion the following :—

Permissible Modifications of the above Programme.—Some investigations which I have made in my own centre lead me to believe that the difficult part of this programme, viz., the administration of the arsenobenzene, could be modified with safety so that in cases where a man could not receive these injections when afloat he need not remain ashore for so long as the plan outlined above entails. The injections could be so spaced out that from the date of one to that of the next the man could reach another centre.

A modification of the ordinary course which I have investigated suggests the following alternatives :—

(a) The patient receives at the outset two injections of small doses, say, 0.45 gm. “914” in a week, to test his tolerance, and then two large doses, say, 0.75 and 0.9 gm. “914,” at weekly intervals. Thereafter each month he receives two large doses, one at each end of a week, until in the course of about 127 days he has received eleven injections of arsenobenzene, totalling about 8.0 gm.

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"914." I have compared the immediate results of a course of this kind, supplemented by 4.0 gm. bismuth, with those of a course on the line first indicated, and can see no difference. If such a course of arsenobenzene as this, with as much bismuth as could safely be administered at the times of the arsenobenzene injections, could be supplemented by mercury by mouth, it seems as if it would entail on the seaman who cannot receive injections when afloat far less loss and hardship, because after the treatment had been well established he could receive the big injections at ports of call.

(b) After the first four injections the month's interval between one pair of large doses and the next pair need not be adhered to rigidly; the interval could be three weeks, if this coincided with a call at a suitable port.

(c) After the first four injections individual large injections could be spaced out at intervals of two weeks.

To summarise, the alternative might be as follows:—

ALTERNATIVE ARRANGEMENTS OF ARSENOBENZENE INJECTIONS

Day of Treatment.	A.	B.	C.
1st	0.45	0.45	0.45
4th	0.45	0.45	0.45
8th	0.75	0.75	0.75
15th	0.90	0.90	0.90
22nd	—	—	—
29th	—	—	0.90
36th	—	0.90	—
43rd	0.90	0.90	0.90
50th	0.90	—	—
57th	—	—	0.90
64th	—	—	—
71st	—	0.90	0.90
78th	0.90	0.90	—
85th	0.90	—	0.90
92nd	—	—	—
99th	—	—	0.90
106th	—	0.90	—
113th	0.90	0.90	—
120th	0.90	—	—

The first four injections would be taken before embarking. They should, in my view, be supplemented by

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injections of a suitable insoluble compound of bismuth, 0.4 gm. in each, so that 1.6 gm. bismuth would also be administered before embarking. By this time the patient would be perfectly safe to mix with his fellows. Thereafter each injection of "914" would be accompanied by one containing 0.4 gm. bismuth, and between injections the patient would take mercury by mouth. The dosage of bismuth given at the outset may appear to be heavy, but this remedy is absorbed only slowly, and investigations by various workers show that the suggested dosage is not too great a strain on the kidneys.

I would emphasise as essential conditions for the adoption of any of these lines of treatment that the subsequent doses of "914" should be full ones and that the patient should faithfully take mercury by mouth. I admit that the large individual dosage entails a little risk of trouble from jaundice, but this is far more than compensated for by the total good which would result. The tendency at present is towards an individual dosage which is too small. It is based on the average tolerance of the patient at an ordinary treatment centre dealing with strong and with feeble. In the case of the seaman it seems reasonable to judge that one is dealing with an average of robustness which is greater than that found in the ordinary treatment centre.

NEED FOR CO-ORDINATION

A serious defect in the present arrangements for the treatment of syphilitics in the mercantile marine is that the dosage, etc., are too haphazard. A seaman calls at a treatment centre and receives an injection which, in respect of dosage, is according to the ideas of the medical officer there. He goes on to another port and receives a dose perhaps considerably smaller than the first-mentioned because this medical officer has no clear idea of the plan on which the patient is being treated and gives such a dose as he would use in commencing a course. A third medical officer gives an injection or not according to his lights, and so on; there is no system, with a proper spacing out of courses, such as would govern the treatment of a landsman. The remedy which I suggest is that standard courses of treatment should be laid down by a committee of experts (say that convened by the League of Nations) and that there should be agreement amongst

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medical officers treating seamen to adhere to these courses in every case where the seaman's treatment has to be carried out by medical officers in a number of places. Then at the outset the medical officer who commences the treatment should set out the programme in full, and each medical officer in turn should mark off the dose or doses which he has administered.

The medical officer who administers the last dose of a course should set out clearly the length of interval before the next course and instruct the patient in writing on his transfer card when he is to commence his next course. On commencement of the second and each subsequent course, details of which would be formulated by the committee of experts, the medical officer should write out the whole course, as suggested for the first. Thus the patient would proceed systematically to the end of his treatment.

It would be the duty of the first medical officer to satisfy himself before allowing a seaman to embark that there was a very reasonable probability of the programme being adhered to faithfully, and he would naturally choose from the alternatives that which seemed most likely to suit the circumstances of the patient before him.

I know well that, in recommending such an agreement, I run a risk of being accused of wishing to treat all syphilitics by rigid codes without regard to individuals. Even such would be better than the present haphazard methods of treating seamen, but there is little or nothing in the accusation. In every centre the medical officer has a routine plan on which he treats his average patient. To say that he treats *every* case individually after the disappearance of the first symptoms is nonsense. Naturally he must vary his treatment for the exceptional case, but for the average one he follows a plan which he has adopted for one reason or another. Also, it must be admitted that no plan of treatment that is followed by a treatment centre is unduly dangerous, otherwise it would long ago have been abandoned. Thus there is little or no risk in following one laid down by another medical officer. If this is granted, no medical officer should hesitate to follow a plan laid down by a strong medical committee.

GONORRHŒA

In the acute stages of gonorrhœa there is little else to be done than irrigate the urethra with a weak lotion.

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Some workers recommend injections with a hand syringe, believing them to be as effective and to have the advantage of secrecy. Personally, I would not recommend a scheme of treatment which relied only on self-administered injections with a hand syringe, and, if provision for irrigation on board ship is impracticable, I would keep the patient ashore. Irrigation is not difficult. It requires a compartment, 3×3 feet, suitably drained in which is hung a simple irrigator, to the tubing of which a patient could attach his own nozzle. The rest is a matter of providing some hot water, concentrated solution of potassium permanganate and a measure. Most patients can be taught by a few lessons to irrigate themselves, and I think that, with simple arrangements, much of the treatment of gonorrhœa might be carried out at sea. After the acute and subacute stages are over more individual treatment is necessary, and for this, as well as for tests of cure, there seems to be no alternative to the seaman staying ashore.

The management of soft chancre usually entails treatment ashore and need not be considered here. Having set out broadly the requirements for treatment of the two main venereal diseases, syphilis and gonorrhœa, it is possible to consider ways and means by which they can be met with the least possible hardship on the seaman. I would emphasise that least possible hardship should be a prime consideration because the more irksome and the more inconvenient the treatment, the greater the probability of concealment and of imperfect cure. Authorities may set up what arrangements for inspection they like to prevent men going to sea whilst suffering from venereal disease; if persistence in treatment means too much unemployment, the man of average intelligence will quickly devise a means of escaping detection and avoiding the treatment.

The problem seems to be divided naturally into two sections, the treatment of seamen on ships carrying surgeons and on those not so provided.

In the case of ships carrying surgeons the question arises whether full provision should be made for the treatment of seamen suffering from venereal disease. It seems to me that there is no escape from such provision, if only because of men who develop disease after embarking. Such men in the early stages are more dangerous to their

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fellows than at any other time, and the sooner they are brought under treatment the better for the ship's company. If provision is necessary for these cases, there seems to be no reason why it should not be extended to continuation of treatment which has been commenced ashore.

It requires apparatus for microscopical examination, for injection of anti-syphilitic remedies and for irrigation of gonorrhœal cases, together with a knowledge of their use on the part of the ship's surgeon. The last is most important. At present too many cases are landed which have been wrongly treated at the outset, and the difficulties of diagnosis and cure are increased immensely. If the value to shipping companies of a knowledge of modern diagnosis and treatment of venereal disease were recognised as fully as it should be, the companies would make such knowledge an essential qualification for the post of ship's surgeon. The difficulty of making shipping companies appreciate this value is that specific instances of indifferent or bad treatment which are well enough known to medical officers of treatment centres ashore cannot be brought to the notice of the companies concerned. It is not difficult for a candidate for the post of ship's surgeon to obtain instruction in modern methods of treating venereal disease, and the knowledge so obtained would be useful to him in other capacities, so that there is every reason for insisting on his acquiring it.

The case of seamen on ships not provided with surgeons is not easy. The management of the case until medical advice can be obtained must be according to the Ship Captain's Medical Guide. In Great Britain the section on Venereal Disease has received the special attention of the Joint Advisory Committee of the Board of Trade and Ministry of Health on the Health of Seafarers.

When the illness is syphilis the treatment should be commenced at the first centre reached, on the lines indicated above, and a programme for its continuation made out by the medical officer.

In the case of gonorrhœa it ought to be possible to commence treatment by irrigation, because it is really very easy to train a man to carry out this line of treatment. After being seen by a medical officer at a port of call the decision can be made as to whether the patient should continue the voyage or not. Generally, with a

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simple provision for prevention of contagion, which is easy enough, continuance ought to be possible.

To summarise, I suggest :—

(a) That at present the complete treatment of seamen suffering from venereal disease entails so much sacrifice on the part of the patient that he is unlikely to adhere to it until the disease has been eradicated. Consequently ways and means of making the treatment easier for the patient are worthy of consideration.

(b) That in respect of syphilis the treatment of seamen is on lines that are too haphazard because there is little or no co-ordination between the several treatment centres which may be concerned in the treatment of a single seaman.

(c) That a medical committee, such as the Committee of Experts on Syphilis convened by the League of Nations, would confer great benefit on the mercantile marine if they could formulate alternative programmes of treatment of syphilis with injections sufficiently spaced out to permit of seamen on ships carrying no surgeons easily reaching ports of call at which these injections could be administered.

(d) That, assuming the formulation of alternative programmes as suggested in (c), every effort should be made to obtain an agreement by medical officers treating seamen to adhere to them.

(e) That, assuming agreement as in (d), the medical officer of a treatment centre commencing the treatment of a seaman suffering from syphilis, or commencing a fresh course of treatment, should set out in full on the transfer card the programme of the course. Also that every medical officer who administers the last treatment of any course should set out clearly the length of interval between this and the next course, so that the seaman may know exactly what is required of him.

(f) That in respect of gonorrhœa, facilities for irrigation on board ship would make it possible to shorten the time the patient must remain ashore for treatment. Further, that such facilities would make men who develop gonorrhœa after embarking safer from the point of view of contagion.

(g) That an essential qualification for the post of ship's surgeon should be a working knowledge of the modern diagnosis and treatment of venereal diseases.

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(h) That in ships carrying surgeons qualified as in (g), a considerable portion of the treatment of a seaman suffering from venereal disease could safely be carried on in ships and that, in this case, considerable hardship and suffering from the effects of venereal disease would be thus prevented.

Arising out of the above Report the following resolutions were adopted by the International Union against Venereal Diseases and by the Second Conference on the Health and Welfare of Merchant Seamen held in Geneva, October 7th to 9th, 1929 :—

(1) The International Union, convinced that a serious obstacle to the eradication of venereal disease from the individual seaman is the great economic sacrifice caused by long periods of unemployment ashore which adequate treatment under present conditions entails, and considering also that when the seaman must receive his treatment in different ports, the course of this treatment is frequently too variable and erratic to insure success, requests the League of Nations :—

(a) In consultation with medical officers of the mercantile marine, to recommend alternative systems of treatment of venereal disease which, whilst being effective, can meet the peculiar circumstances of seamen and be pursued with the minimum of economic hardship to the patient.

(b) To endeavour to secure agreement by nations that the treatment of seamen suffering from venereal disease shall be pursued systematically in their different port clinics according to its recommendations.

(2) The International Union, considering that venereal disease in a seaman often makes its first appearance when the patient is at sea and that skilled diagnosis and treatment at the earliest possible moment are of prime importance to the outcome of the disease, would urge on shipowners the great benefit they would confer on seamen by insisting on proof (if practicable, by examination) of a knowledge of modern methods of diagnosing and treating venereal disease as one of the qualifications for the post of ship's surgeon.