THE TREATMENT OF SYPHILIS.

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Of all diseases mentioned in the nomenclature, there is not one of greater importance to the naval or military surgeon than the one under discussion, viz., syphilis. Taking them as a whole, no disease has been the cause of more invaliding and mortality, either directly or indirectly, than this disease. By its ravages it has rendered armies almost useless, and only a few years ago it was calculated that, in India alone, a force amounting to a whole brigade of British troops was constantly "out of action" through it. But in spite of all this I have always thought that syphilis has not received that degree of attention of which it was deserving, and that it has generally been put in the background, compared with certain other diseases. Take, for instance, two men reporting sick, one with enteric fever, the other with syphilis, which receives the more attention? Undoubtedly the former; special reports, &c., are made about it, whereas, generally speaking, the syphilitic case is regarded as an ordinary slight one, undeserving of any special attention. But, looking calmly at both cases, which is really the more serious? Undoubtedly the syphilitic, for in all probability the enteric case will recover without any bad results, but the syphilitic, if he regains his health temporarily, will probably develop in later life some cerebral, spinal or arterial disease, and die a premature death.

All the world over men of science have, especially during the last twenty years, been seeking fresh knowledge as regards other affections, whereas they have to a great extent neglected syphilis. The treatment of it has made slower progress than that of any other disease, although we know that the surgeon can do more for syphilis than he can for almost any other class of ailment. It is the treatment of this disease which I propose to discuss in this paper.

After having been employed as a remedy for syphilis for over four hundred years, and having passed through various stages in the ups and downs of heated discussions as to its value in the treatment of the disease, I think that at the present time it is acknowledged by the vast majority of the profession that mercury is the true agent to be employed in the endeavour to eradicate the virus of syphilis,
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and that without it Nature (in the majority of cases) is unable to expel the specific poison.

In days gone by syphilis was looked upon as almost an incurable disease, but now we know that, given certain conditions, it is quite curable, as far as can be determined by man. Moreover, I think we have evidence that in certain cases even Nature, unassisted, is able to rid herself of the poison, but that when assisted by mercury, given scientifically and for a continuous period, she can certainly cure syphilis. In the treatment of syphilis, the main point to be considered is what method of giving mercury will enable us best to continue treatment over that lengthened period which we know to be absolutely necessary to give our patients a chance of a permanent cure.

Let us consider the methods at our disposal. Firstly, there is internal administration, by which mercury is given by the mouth. Formerly I used to treat all syphilitics in this manner, but I found generally that after the patient had been taking the metal for say three or four months his general health became affected, digestion was interfered with, diarrhoea ensued, and he became cachectic. At this stage the mercury had to be stopped, but even though the man tolerated the drug well, the chances of his taking it regularly, when all symptoms had disappeared, for any considerable time were very remote. Who would suggest giving mixtures, pills, or powders to middle-class patients when at their daily occupations, and expect them to take them regularly and systematically? Who among us cannot recall patients whom we found impossible to treat owing to their forgetting, either deliberately or otherwise, to take their medicine? Long ago I came to the conclusion that it was simply impossible to treat syphilis by the internal method for that length of time which is really necessary to cure it.

Then there is the "inunction method." This is a very old procedure, but it is doubtful whether it has ever been carried out to any great extent in England. Aix-la-Chapelle or Aachen, in Germany, is the "Mecca" of this mode of treating syphilis. There it has been carried out for centuries and in accordance with the following régime:—

(1) The patient is advised to rise early and to take a walk to the sulphur spring, about half a mile distant, there drinking a couple of glasses of the natural waters.

(2) After this comes breakfast of a light nature.

(3) From one to two hours later he proceeds to one of the public baths, where he remains immersed in a bath of natural water for not
less than twenty minutes, the temperature of the water being 30° to 35° C.

(4) Half an hour later a professional rubber rubs into the patient's skin 75 grains of mercurial ointment, which is only a trifle weaker than the unguentum hydrarg. (B.P.). The rubbing lasts twenty minutes, and to prevent local irritation the parts of the body rubbed are changed daily, thus, on the first day the ointment is rubbed into the calves, on the second into the thighs, on the third into the back and arms, and on the fourth day into the chest.

The course of the above treatment lasts six weeks. During this time the patient is told to pay strict attention to his teeth, to brush them scrupulously after each meal, and to use frequently a strong astringent mouth-wash, which is ordered for him. He is advised to live well, drink freely of milk; spirits are forbidden, but beer and Rhine wines are allowed. Fresh air and exercise are strongly advised. After this patients are allowed to go away, but are advised to return again within the year for a similar course. I gave this mode of treating syphilis a full trial, and for a long time treated all my syphilitic patients by it, and with great success, but it had certain drawbacks which there was no getting over, as it was almost impossible to carry it out when there was any great number of patients, and it was certainly impossible to continue it once the patient was discharged from hospital; so one had to look elsewhere for a mode of treating the disease, by which treatment could be continued for that lengthened period which we know to be so necessary in order to effect a cure in the fullest sense.

The intramuscular method seemed to fulfil this condition. Since 1890 I have treated all my syphilitic cases by it. During that period I have tried all the solutions of mercury which have from time to time been recommended as injections, viz., perchloride, sal-alembroth, soziodol of mercury, and lastly, but not the least, the metallic mercury in the form of a cream as recommended by Lang, of Vienna, in 1888. Of all these I may say at once that I give preference to the last, and my chief reasons for doing so are:—

(1) It is much less painful (an important fact).

(2) Its effect on the symptoms and on the ultimate cure of syphilis are far more marked than those following the use of other forms of mercury. Why this latter should be is probably due to the fact that the metal is more slowly absorbed than when administered otherwise.
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Of recent years I have confined myself almost solely to the injection of the metallic mercury in the form of a cream. The original cream suggested by Lang consisted of equal parts of metallic mercury and lanolin mixed with olive oil in the relative proportions of 4 to 6. I have modified this, first of all using carbolised oil instead of olive oil, and the form I am now using is as follows: Hydrarg., $\frac{5}{i}$; lanolin pur., $\frac{5}{ii}$; parolene carbol., 1 per cent., $\frac{5}{iv}$; of this I give $\frac{5}{vi}$ as an injection once a week. The syringe I use is an all-glass one made by Burroughs and Wellcome, of London. It can very easily be rendered aseptic; the needles are of platino-iridium (as steel ones are apt to snap), and can be sterilised without injury. Needles ought to be fixed into metal sockets with solder. When vulcanite sockets are used the needles are only screwed into them, and from the rotatory motion used in driving the needle into the muscle, unless firmly fixed, the needle is liable to unscrew. In giving an intramuscular injection of mercury one thing is absolutely necessary, “the needle must be driven into the muscle itself.” The length of needle used is about an inch, this must be sent in its entire length. Before giving an injection the needle must be rendered aseptic, and in introducing it a rotatory motion ought to be used, and the same movement employed when withdrawing it.

As to the question of abscesses following injections, all I can say is that out of some 10,000 injections I have only had one abscess, and I think that this good fortune is due to following strictly the simple rules I have myself laid down. My mode of procedure in carrying out this treatment is as follows:

1. The patient's weight is taken and carefully recorded; this being done at intervals whilst treatment is continued.
2. Gums are looked to and teeth are examined, any old stumps being extracted.
3. The patient is cautioned to wash his teeth after each meal, and to use frequently a strong mouth-wash of lead and alum whilst under treatment.
4. Plenty of open air and a moderate amount of exercise are allowed.
5. Spirits are forbidden *in toto*, but wine and beer allowed, together with a liberal diet.
6. Patient attends once a week, when he receives an intramuscular injection of $\frac{5}{v}$ of the cream already described. With regard to the weekly injection, I say as a rule the patient gets a weekly injection, but there can and ought to be no hard and fast
rule about this, one must and ought to use one's own discretion. One ought to remember that in giving mercury by this method, one of the great advantages is that we can gauge the amount given far better than when it is given otherwise. Each case ought to be treated on its merits, and the effect of the metal carefully watched. Body weight is a great help as to whether the mercury is doing good, hence the need to weigh frequently. If weight goes down, stop treatment for a month and then resume it. As to the length of time treatment ought to be continued to effect a cure, of course it is impossible to dogmatise, but I think it should be continued, more or less, for at least a year.

Such then, briefly, is the mode of treatment which I have been carrying out since 1890. During this time I have treated many hundred cases of syphilis with the greatest success, far greater than at one time I thought possible. Many of these cases have been published from time to time and records of them have been kept. In the hands of others success has also been attained, whilst a minority have reported against it. Unfortunately, there has never been (with one exception) an official trial given to the method on a large scale, so that comparative statistics could have been available; the treatment has been left in the hands of individuals, who carried it out as they liked or not, but from time to time we have official remarks on it: thus, in the A.M.D. Report for 1894, the Surgeon-General with H.M. Forces in India makes the following remarks:

"Although the above figures reveal a lamentable prevalence of venereal disease, they do not represent the extent of inefficiency due to secondary syphilis. In several stations medical officers adopted the plan of treatment by intramuscular injections of mercury so strongly recommended by Surg.-Capt. Lambkin, A.M.S., and many of the cases so treated were only taken into hospital for a few days at the beginning of the treatment. Most of the medical officers who adopted this plan of treatment reported very favourably concerning it."

In the Report for 1895 we read: "Intramuscular injections of mercury were again tried with marked success. Intramuscular injections of mercury and lanolin were found to give good results when every other treatment in a very severe case of secondary syphilis had failed."

In the Report for 1896 we find: "The hypodermic injection of mercury was freely resorted to, with excellent results. This treatment enables many men who would otherwise be in hospital to
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perform their usual duties; it brings the patient more quickly than the old method under the influence of the drug and does not damage digestion. Moreover, the disease yields more readily to the treatment, but is apt to cause somewhat sharp salivation at times."

So again in that for 1898 it is stated that "The practice of continuing treatment after men have been discharged from hospital is favourably reported on from all parts of India. The improvement in appearance and health of the men was generally commented on, and there can be no doubt that it gives the soldier the best chance of having the disease thoroughly eradicated. Part of the reduction of the admission rate was undoubtedly the result of the out-patient treatment, and also greatly lessened loss of service, and was probably the means of considerably reducing the number of men invalided. Most medical officers used the intramuscular injection of mercurial cream in treating their out-patients."

In the last Army Medical Report the following are the remarks of the Principal Medical Officer in India:—

"The practice of keeping men under regular observation, and of continuing treatment in cases of syphilis after the men have been discharged from hospital, has practically become universal, and reports favourable to the system have been received from all parts of India. In the annual reports it is repeatedly remarked that the men under treatment improved greatly in health and appearance. From the statements made in some of the reports there is no doubt that part of the reduction in the invaliding for secondary syphilis and the considerable financial benefit to the State therefrom may be placed to the credit of the out-patient plan of treatment, otherwise the intramuscular method."

Similar comments on this subject were made by the Principal Medical Officer in Egypt, who wrote: "In the autumn of 1899 the General Officer commanding the British Forces in Egypt, Major-General the Hon. R. Talbot, C.B., who even then fully appreciated the special value of this treatment, asked me to apply it to the whole of the army in Egypt." He then proceeds to give some statistics, and from these it is noticeable that admissions to hospital for primary syphilis were reduced from an average of 201 in the four years 1896-1899, to 32 in 1900, when the intramuscular treatment was in vogue, while the average ratio of constantly sick per 1,000 of strength fell from 47·4 to 8·5. The admissions for secondary syphilis gave an average for the four years of 195, against 48 in 1900, and the ratio of constantly sick per 1,000 of strength was 45, as against 12·7 in 1900. Under the head of
"Invaliding for Syphilis," the average for the years 1896 to 1899 was 7.5 per mille, while for the year 1900 it was but 0.01. Early in 1901 a careful inspection of the men in the command was made, and out of 4,000 men only one was found to be unfit for active service owing to syphilis, and he had arrived from England recently in an advanced condition of secondary syphilis.

The same officer ends his report by remarking that the tables for the last two years, 1899 to 1901 (when syphilis was treated by the intramuscular method), show a remarkable diminution of admissions and invaliding for syphilis, unequalled in any command at the time.

The importance of the above experience, with its complete success, cannot be exaggerated. It will result, I hope, in further organised trials being given to the treatment all over the world. Even now, I am in a position to state that this year, in India, an extensive official trial of it has begun. In that country there is unfortunately only too large a field for experiments of this kind, as there, during the last ten years, the army has been almost decimated by syphilis. As to the result of this trial, I have no doubt but that it will prove a huge success under the administration of the present Surgeon-General, as I know that he has the matter very much at heart and is making every effort to lessen the inefficiency of the army in India from this terrible disease.

I would close these somewhat discursive remarks by quoting the last few lines of the concluding paragraph of my original paper on the intramuscular treatment of syphilis, which was published in 1891, wherein I stated that one of my reasons for writing the paper was "In the hope that it may possibly be the means of drawing the attention of the profession, especially that of the Medical Staff of the army, to this treatment, and stimulate them to give it an extended trial. If they will, I feel certain that before long they will discover what a boon it is in the treatment of syphilis, and in the case of the soldier, while they will make his life less of a burden to himself, they will render a great service to their country, by enabling him to give his services to it, and thereby save an enormous expense. At the same time they will lessen considerably the invaliding and death-rates of the army."

I trust that I may not be deemed too presumptuous in thinking that these last remarks have been already partially fulfilled.