ON THE ETIOLOGY AND CURABILITY OF PHTHISIS.¹

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PHTHISIS is one of the most prevalent diseases in Sheffield; one therefore has opportunities of treating it on a very large scale, especially in hospital practice. There are several factors which act conjointly in its production among the working classes, so that one cannot be surprised at its frequency.

Many of the men, and women too, have to assume a stooping position when at work, which does not permit of proper expansion of the lungs, and in this way predisposes to disease. They have to work in shops where a number of others are present, and where, consequently, from this cause alone, the air is the very reverse of pure. The workshops and works are situated in parts of the town where the atmosphere is very prejudicial to health during a great portion of the year; for it is moist, it holds in suspension a large quantity of dust, grit, soot, etc., which are inhaled, cause irritation, and are coughed up frequently during the day; and it also is, in fact, composed of different deleterious gases derived from various sources. The inhalation of such an atmosphere must necessarily be injurious to the internal surface of the lining membrane of the tubes and air cells of the lungs, with which it comes in contact.

Drinking to excess has, according to my experience, done its share of work in the production of this disease. Strong men in this way bring on a diseased state of liver and stomach. Such men, generally speaking, die of hepatic or renal diseases, or other diseases, as those of the nervous system; but, not infrequently, phthisis comes on and rapidly carries the patient off.

Amongst the poor, the habit of drinking tea is a very prevalent one. The women have tea with every meal. This is a pernicious habit, which does an infinite amount of harm; the tea being an astringent, and almost constantly present in the stomach, acts upon its glands and mucous membrane; the secretions become depraved; imperfect and often painful digestion follows as a matter of course; anæmia is the result, with general malnutrition, and phthisis. These poor persons drink tea because they cannot afford better food often, and think that they are taking nutritious food, little knowing that they are taking a remedy which is so injurious to the gastric mucous membrane, and ultimately destroys the appetite.

I consider that many cases of phthisis may be traced in a great measure to improper clothing. In winter all persons should wear woollen clothing next to the skin, and in summer the same custom should prevail, but the material should be much thinner, and this should extend from neck to toe. I have seen working men in the third stage of phthisis glorying in the fact that they have never worn any warmer clothing than cotton shirts. Ladies, as a rule, do not wear sufficient clothing. Their undervests, bodices, and other underclothing hardly extend high enough to cover the upper part of the chest. The lower classes are very careless, especially when suckling; you frequently see the chest uncovered more or less for hours. I often find delicate ladies who ought to be warmly clad—much more so than I am—going about in the middle of the winter with no close covering to the lower extremities but a pair of loose linen drawers and stockings. The outer loose clothing in the shape of dress, etc., gives comparatively little warmth. Such ladies, in my opinion, should always wear flannel or woollen clothes closely applied to the skin. Children we see daily, delicate little things, running about with hardly any covering to their lower extremities, nothing but short dresses and petticoats hardly reaching their knees, and thin linen drawers, and yet the parents wonder how they catch cold. Improper and insufficient clothing is a very great factor in the production of phthisis. Want of exercise has much to do with its causation. I find that it is a difficult matter to persuade patients, especially ladies, to take outdoor exercise. They will go out shopping, and they will undergo severe exertion for hours in a ball-room, but will not walk into the country. I believe that much of the benefit derived from residence at some of the places recommended for resort is often owing to

the patient taking plenty of exercise, tempted to do so because the weather permits of it, and the cares of home do not detain within doors. I have after much persuasion often succeeded in getting my patients to take exercise when at home, and have always been well satisfied with the result. By such treatment the appetite has been improved, digestion has been rendered less difficult, and owing to the increased circulation through the lungs healthy changes have taken place. I have always endeavoured to prevent the patient from remaining all along within doors, closely confined to one room perhaps, with medicine bottles on the table by their side, moping and thinking of their ailments; and I think that we might much more frequently make use of the places of resort in our own country, in England, in Scotland, in Ireland, and Wales, at different periods of the year, than we do, instead of sending them away out of reach of relatives and friends.

In no disease is hereditary predisposition more evident than in this. I have simply in this short paper mentioned a few of the most ordinary causes that I have met with, most of them preventable.

Although, as I have shown, there are so many factors which assist in giving rise to phthisis, still I have been astonished at the number of cases which recover. Fully seven-eighths of those I have had under my care have received decided relief—many would say been cured. The patients have gained flesh, a most important sign; the cough has disappeared; there has been entire absence of expectoration; the appetite has been good, and they have been able to attend to their ordinary duties. Many of them I have watched for years, and have had to treat for other complaints. Many—I may say the majority—I have lost sight of after a time.

Certain physical signs generally more or less remain, as no doubt the lungs have been permanently injured; but I have frequently seen all the physical signs met with in the first stage entirely disappear; those indicative of the second stage recovered in a great measure, and vomica closed by agglutination of their walls, I presume, leaving no physical sign whatever indicative of a cavity, but of other changes having taken place which have been permanent and harmless.

With regard to the treatment of such cases, I have found no local application to the lung in the first or second stages answer much better to begin with than a small blister, say 2 by 2 inches, applied to the infra-clavicular region, or wherever the necessity seems to be. I believe I have seen in some hundreds of cases the cough relieved, the local signs disappear, and the general symptoms much alleviated by such local treatment. Of course it is very difficult to judge, when general treatment is adopted as well, whether improvement should be attributed to this one application: but still I have often adopted a similar general treatment in other cases without as beneficial a result, and, at the same time, in many cases done but little else than apply this local irritant for a time, and yet seen good results ensue.

I have tried the inhalation treatment pretty extensively, have used many of the inhalers generally recommended, and have had patients placed in a room containing a medicated atmosphere. Many patients have stated that they have derived much benefit from such treatment, that the cough has been ameliorated and the quantity of expectoration diminished by it. Others, again, and I believe the majority, although they have been pleased with the treatment at first, have at length given it up, finding that they have not derived the slightest benefit from it. I believe that in many cases it does diminish the amount of expectoration, and feel sure that it makes the expectoration and breath when offensive less so, and I trust that, as our knowledge increases, treatment by inhalation will be productive of more good every year.

I have reason to be well satisfied with the success of my treatment of the cases of phthisis which I have to take charge of, and consider that that success has been dependent not upon any special mode of treatment adopted. I believe every case ought to be specially studied. The medical gentleman who gives cod-liver oil, a tonic mixture and a linctus to every patient, will not be successful as a rule in his treatment. As I said before, about seven-eighths of my patients have practically recovered. In all these cases I have first of all endeavoured to remove the cause, if found. The patient who had lived in an impure atmosphere has been removed from it. A constrained position when at work has been avoided. The working in a close room has been prevented if possible. The habit of taking alcohol or tea to excess has been put a stop to. Daily exercise has been recommended whenever the weather has permitted of it, and good nourishing diet recom-

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mended to be taken at regular hours. A blister has been applied to the chest, and certain medical treatment, as indicated by the symptoms, adopted, and under the influence of this treatment the patient has frequently got well. Quinine I have found to be one of the most useful remedies; it improves the appetite, it tends to check the nocturnal perspirations, and acts as a general tonic; but many patients cannot take quinine, especially those who suffer from gastric derangements, which have to be specially treated before it is administered. Iron in some form or other is indicated at some time. The perchloride I hardly ever prescribe, as it destroys the teeth in time, however careful the patient may be. I prefer the syrup of the phosphates, the citrate of iron and quinine, or of ammonia and iron, or dialysed iron.

I think in the present day there is a great tendency to ride hobbies. One gentleman does little else except recommend the use of certain inhalers, another prescribes a particular remedy. I believe that the physician who is most likely to cure his patient is the one who, having satisfied his mind as to the exact condition of his patient, does his utmost to find out what has brought on the complaint, and having found out the cause, is firm, and if possible compels his patient to avoid it. By avoiding the cause of a disease much is done toward the cure. We should always keep in mind that great benefit is frequently derived from the great altitude treatment of phthisis in suitable cases, as by such treatment the patient is supplied with air pure and rarefied, and receives many other benefits. Sea voyages are also beneficial in certain cases, but at present I am not dilating on these two modes of treatment, but am endeavouring to prove that the physician who makes good use of the knowledge which we already possess of the treatment of phthisis may feel pretty confident of success in the majority of cases, even without sending any away from our own country. Meanwhile, whilst utilising this knowledge, we should watch with care the discoveries which are constantly being made by our friends the bacteriologists and others, and earnestly hope that some day a method will be found by which this disease may be stamped out, as small-pox can be now, and thus the lives of thousands may be saved.

THE ELECTRIC ILLUMINATION OF THE MALE BLADDER BY MEANS OF THE NEW INCANDESCENT-LAMP CYSTOSCOPE.¹

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FROM the very commencement of the century, endoscopy has attracted the attention and the efforts of the medical profession. Since Barrini, of Frankfurt, introduced his "light conductor" in 1805, various instruments have been invented for examining the interior of the bladder and urethra. Practically, however, the attempts have hitherto proved unsatisfactory, for all endoscopes have failed from insufficiency of illuminating power. Twenty-five years ago Bruck, of Breslau, a dentist, conceived the brilliant idea of utilising a loop of platinum wire, maintained at a white heat by means of a galvanic battery, as the source of light. The conception was carried out, and a monograph written upon it. The instrument was tried at the Vienna Hospital, but proving a failure, it was discarded, and the attempt forgotten. In 1877 Dr. Nitze grappled with the same problem, and Leiter, the well-known instrument maker of Vienna, was entrusted with its solution. After ten months of expensive and indefatigable labour, Leiter constructed an electric endoscope, by means of which the bladder could be effectively examined.² The instrument was, however, encumbered by the necessary apparatus for conveying currents of cold water around the endoscope to prevent overheating. It was hampered by a large Bunsen battery and rheostat, and it was, furthermore, complicated, costly, and capricious. On the introduction of the incandescent lamp, Dr. Nitze and Mr. Leiter proceeded to work independently of each other, and the result has been, in each case, the production of endoscopes simplified by the employment of the smallest Swan or Edison lamp ("mignon" lamp) as the illuminating power. These

instruments were finished in 1887, and were brought by their respective makers before the German Surgical Congress at Berlin.³ Having used both varieties upon a series of normal and pathological bladders, I have brought them here this evening to show how simple, safe, and successful these cystoscopes are as compared with their progenitors of 1862 and 1879-1880. Moreover, as they have not as yet, I believe, attracted the attention of the profession in England, I venture to describe their construction, to demonstrate their capabilities and defects, to lay down a few rules for their use, and to critically compare the merits of each.

The Construction.—The three essentials of the construction of both varieties of the electric cystoscope (Nitze's or Leiter's) are practically identical: 1, a catheter (Fig. 1 AK) of No. 22 gauge (French) in size, with a sharp elbow; 2, a terminally placed incandescent lamp (Fig. 1 L); 3, a window (Fig. 1 P or R), closed by a prism, placed near the bend of the elbow to refract the entering rays, so that they pass along the tube (Fig. 1 Tf) to the observer's eye.

These points are worthy of a detailed description.

1. In Leiter's cystoscope the catheter is built up of two insulated metal tubes slipped one inside the other. The inner ("telescope") tube (Fig. 1 Tf) terminates abruptly at the prism P. Both tubes serve as the conductors of the current between the battery and the incandescent lamp.

2. The smallest incandescent lamp ("mignon" lamp) (Fig. 2 L) occupies the end or tip of the cystoscope. It is enclosed in a screwed-on silver hood (Fig. 2 G), which has on one side an elliptical aperture (Fig. 2 CF) fitted with a plate of rock crystal for the transit of the rays of light. But here notable and important differences exist in the two varieties: (a) in Leiter's cystoscope (Fig. 2 L) the carbon filament burns within its small glass globe, and is protected moreover by the windowed hood (Fig. 2 G). In Nitze's instrument the carbon filament burns within the hood and lacks a globe; (b) the lamp which Leiter uses is a removable and a cheap globe (three shillings) (Fig. 2), which, if it is burnt through, can be replaced in a minute by another, by merely unscrewing the hood. But the lamp which Nitze employs is an integral part of the instrument, being permanently enclosed in the end or tip. If, then, the filament be burnt through, the entire cap must be unscrewed and be sent back to the maker for repair, at an outlay of ten shillings; (c) moreover, in Leiter's lamp the filament is longer, and gives a brighter and larger source of light; (d) the elliptical window (Fig. 2 CF) is larger and affords a greater egress to the light.

3. The window (Fig. 1, P or R) in the bend of the elbow has an arrangement of reflectors and a prism.

Fig 2.—Shows (1) the lamp; (2) the lamp (L) adjusted; and (3) the silver hood (G) for the lamp (in Leiter's cystoscope).

4. Each instrument possesses a "key" or "kick-over" (Fig 1 GC) for turning on or off the current.

5. A small portable four to six-celled battery with carbon-zinc

¹ Abstract of a demonstration of the instruments before the Medical Society, January 23rd, 1888.

² *Wiener Med. Presse*, 1879, No. 26.

³ Dr. Nitze, *Verhandlungen der Deutschen Gesellsch. für Chirurgie*, Congress, xvi, 1887, p. 177; Dr. Brenner (for Leiter), p. 89, *ibid*.