

latter vessels into the air-pass: it is covered by an epithelium, consisting of small flattened nucleated cells.

Having premised these observations on the healthy structure of the lung, I pass on to examine the changes it undergoes in the progress of emphysema.

[To be continued.]

SCROFULOUS DISEASES OF THE EXTERNAL LYMPHATIC GLANDS:

THEIR NATURE, VARIETY, AND TREATMENT.

By P. C. PRICE, Esq., Surgeon to the Great Northern Hospital; the Metropolitan Infirmary for Scrofulous Children at Margate; etc.

III.—TUBERCULOUS DISEASE OF THE EXTERNAL LYMPHATIC GLANDS.

[Continued from p. 818.]

General Treatment. From the earliest times, tuberculous conditions of the lymphatic glands—the true scrofulous glands of both ancient and modern writers—have obtained every kind of treatment which art could suggest. It is needless to recapitulate the various *specifics* used by the fathers of medicine, and venerated through a long series of years; and, although the majority have been dismissed from our modern *Pharmacopœia*, still one is almost inclined to believe that, from persistent use and recommendation, rare virtues were really found in them. There is, perhaps, no subject in medicine which calls forth our ridicule so much as the comprehensive treatment of scrofulous affections by the older physicians and surgeons of all civilized nations. How vainly do we endeavour to suppress a smile when reading the long list of *specifics* which many an ancient writer describes with most unwavering faith; and how that smile is turned into laughter when, in still later times, we find that our own countrymen were not behindhand in awarding (as the courtly John of Gaddesden, of *Rosa Anglica* fame, has recorded) to the excrement of doves and the blood of weasels an excellent virtue over scrofulous sores, notwithstanding their inferiority to the efficacy of the royal touch! Through centuries, when learning and science in other branches were fast improving, the same superstitious ignorance directed the skill and practice of many (for that time) excellent physicians; and it is in vain we look for any really definite and sensible employment of medicinal means in the treatment of scrofulous affections, till Wiseman, deploring the want of accurate knowledge on the subject, wrote his celebrated treatise on *The Struma or King's Evil*, in the reign of our Charles II. From this period, physicians and surgeons seemed to vie with one another in rendering the treatment of the disease as scientific and simple as possible; so that at the present time it may be justly said that, in the hands of educated men, there is no affection of common occurrence which meets with more skilful management.

The general treatment required in the management of cases of tuberculous disease of the external lymphatic glands may be thus considered: firstly, in giving due attention to what may be called the natural requirements of bodily health, such as good and nutritious nourishment, pure and fresh air, combined with light, and the enjoyment of healthy exercise; secondly, in the administration of certain medicines.

Tuberculous disease of the external absorbent glands has already been shown to occur in individuals in whom the constitutional powers are low, or affected by certain peculiarities which render them more than ordinarily susceptible to various kinds of diseased action; and hence, proper attention to the natural requirements of health, and the administration of certain efficacious medicines, often tend very greatly to improve and renovate impaired conditions of constitution.

My own observations lead me to believe that the occurrence of glandular tuberculosis is most intimately associated with depraved states of the general powers; and I am convinced that, in a very large proportion of cases, the earliest manifestation can be traced to a period in the life of the patient when an insufficient diet and imperfect sanitary comforts formed the meagre supports of a frame which, perchance, had already sown within it the seeds of hereditary tendency to mischief. Dr. Tyler Smith, in his work on *Scrofula*, has well insisted on this point; while the practical researches of Lugol, Baude-locque, Guersant, Hufeland, Phillips, Lebert, etc., have likewise corroborated what, on very slight consideration, appears so apparent.

At the Children's Hospital at Margate, many of the little patients, when admitted, are the subjects of both incipient and advanced tuberculous disease of the lymphatic glands; and oftentimes they are in such a low and impoverished state that it is astonishing not to find still worse forms of scrofula than are generally seen. These children are rapidly improved, and rendered far less susceptible of continued and fresh attacks of disease, by a liberal and sustaining diet; and while, doubtless, improvement is in some way due to the medicinal means that are employed, still I am persuaded that the greater amount of good is effected by a proper allowance of those resources which Nature has provided for revivifying the flagging powers of a worn and distressed constitution.

In addition, it is all important that, besides good and nutritious diet, pure, fresh, and invigorating air, with well lighted and ventilated apartments, should be afforded to scrofulous patients, and especially to those who are the subjects of direct tuberculous conditions of the glands and other organs. I cannot, while endeavouring to impress most strongly the necessity of due attention to the use of natural and sanitary measures, as taught me by a large experience in the treatment of all kinds of scrofulous maladies, avoid quoting from Dr. Smith's valuable work the following:—"In the place referred to (a union workhouse in Kent), the parish surgeon reported that, on the 29th April, 1841, there were then in the house seventy-eight boys and ninety-four girls; and that all the seventy-eight boys had enlargement of the neck, and forty-two had likewise goitre; that of the girls and infants, ninety-one had enlarged glands at the back of the neck, and forty-three also goitre. . . . The diet in these cases had been bread and cheese for dinner four times a week; suet pudding and vegetables two days, on the Poor-law scale; and meat only one day of the week for dinner, and then the usual stinted workhouse quantity. Besides this scanty and innutritious food, which may, for *growing children*, be truly called a scrofulous diet, the dormitories were ill ventilated and excessively crowded." (P. 39.)

In contrast with this scale of diet, I submit that in use by Mr. Weekley, the excellent and kind hearted manager of the Children's Infirmary at Margate, for those patients who are convalescent, and able to enjoy the out-door advantages of this well conducted establishment; while every necessary is granted to those who require more important medical and surgical treatment.

Diet List of the Metropolitan Infirmary for Scrofulous Children at Margate.

FROM FIVE TO TEN YEARS OF AGE.

| Breakfast. | Dinner. | Supper. |
|---|--|---|
| Four or five oz. bread and butter, and $\frac{1}{2}$ -pint milk in water. | Three or four oz. roast or boiled meat, with $\frac{1}{2}$ -lb. potatoes, or potatoes and bread, or other vegetables, $\frac{1}{2}$ -pint London porter,* on Sunday, Monday, Tuesday, Thursday, and Friday. Eight or twelve oz. of either rice or currant pudding, on Wednesday and Saturday. Soup occasionally, in lieu of pudding. | Four or five oz. bread and butter, and $\frac{1}{2}$ -pint milk in water. |

FROM TEN TO SIXTEEN.

| Breakfast. | Dinner. | Supper. |
|--|---|--|
| Six or seven oz. bread and butter, and $\frac{3}{4}$ -pint of tea. | Five or six oz. roast or boiled meat, with 1 lb. potatoes, or other vegetables, or $\frac{1}{2}$ -lb. potatoes, and 3 oz. bread, $\frac{1}{2}$ -pint London porter,* on Sunday, Monday, Tuesday, Thursday, and Friday. Sixteen oz. of either plum or currant pudding, on Wednesday and Saturday. Soup occasionally, in lieu of pudding. | Six or seven oz. bread and butter, and $\frac{3}{4}$ -pint of tea. |

* The quantity of porter or stout, which is the very best, is controlled by the order of the medical officers; as, indeed, are all the articles of food, which are most liberally allowed, according to the requirements of individual cases.

Children, and, indeed, all individuals who are the subjects of tuberculous disease of the lymphatic glands, exhibit various constitutional symptoms which demand the foremost attention of the practitioner; for, until such be amended, it is generally useless to employ those remedies which are intended to have a special influence on the local affection.

When tuberculous disease of the glands occurs independently of other scrofulous affections, or is the chief disturbing malady, there will usually be more or less irregularity of the digestive functions. Dyspepsia is a very frequent symptom, and one that causes considerable inconvenience. Again, there is a general debility about all the functions and organs of the body. The muscular, nervous, mucous, secretive, and arterial systems are deranged; and the whole constitution appears undermined, irritated, and depressed. To improve that irregularity of function which presents the most important relationship to the local affection, is the foremost aim of the practitioner. If the stomach and bowels are deranged—and such will frequently be found the case—attention must be bestowed to the regulation of their proper functions and actions; and, remembering the importance of this feature, I invariably commence the treatment of a case which is placed under my care by administering either an emetic or purgative, or both, provided special symptoms do not forbid the practice.

Having restored a better tone of health by the allowance of a good and liberal diet, bestowed attention to all sanitary measures, and obtained a cessation of, or a marked improvement in, the irregular action of various organs, by the administration of certain medicines, as tend to promote such an aim, as tonics, alteratives, etc., it will then be expedient to attend specially to the glandular mischief.

The following is a list of those agents which have been selected by experience to prove most advantageous in the medicinal treatment of glandular tuberculosis.

Iodine, and its combination with various substances, constituting the following preparations: Iodide of potassium; iodide of sodium; iodide of ammonium; iodide of iron; iodide of lead; iodide of mercury.

Bromine and its combinations: Bromide of potassium; bromide of mercury.

Mercury and its combinations: Calomel; bichloride of mercury; mercury and chalk; iodide and biniodide of mercury.

Iron and its combinations: Sesquioxide of iron; carbonate of iron; sulphate of iron; sesquichloride of iron; iodide of iron.

Barium and its combination: Muriate of baryta.

Potassium and its combinations: Liquor potassic; carbonate and bicarbonate of potash; iodide of potassium; bromide of potassium.

Sodium and its combinations: Carbonate and bicarbonate of soda; chloride of sodium; iodide of sodium; bromide of sodium.

Calcium and its combinations: Lime-water, or liquor calcis; chloride of lime; hypophosphite of lime; bone-earth.

Various *minerals*, as gold, manganese, etc.

Cod-liver and other *oils*, as neats'-foot, cocoa-nut, olive, etc.

Mineral acids, consisting of hydrochloric acid, nitric acid, sulphuric acid.

Vegetable tonics and bitters: Quinine; barks of various kinds; bitter infusions.

Vegetable extracts, etc.: Conium (hemlock); digitalis.

Purgative medicines, of both mineral and vegetable compositions.

Salt Water and other Baths. These various medicinal agents are exhibited by the mouth, in a soluble form; or through the skin, by means of local applications and baths.

Iodine. First in the list of all medicines that are of value in the treatment of scrofula stands iodine. It was, as is well known, discovered by M. Courtois in 1811, and investigated by Sir H. Davy and M. Gay-Lussac. Since this period, mainly through the researches of Drs. Monson, Coindet, M. Lugol, etc., it has been considered almost as an infallible specific. No one who has paid attention to the therapeutical action of this agent can deny that, when judiciously administered, it does not possess a certain distinctive influence over low, tardy, subacute or chronic inflammatory disturbance of the absorbent glands. We have already seen that such is the case; and it now remains to show to what extent, so far as an individual experience is concerned, it is available as an influential agent in the reduction or removal of glandular enlargements and ulcerations dependent on tuberculous implication.

In the early stage—the very first—of threatening tuberculous invasion of the glandular system, I believe a systematic and judicious use of iodine is oftentimes fraught with the

greatest amount of benefit. It usually results that enlargement of a gland ensues before the actual deposition of tuberculous matter. This increase in size is dependent, in all probability, on direct irritation propagated by the blood; and if it continue for some considerable period, which it frequently does, ere the specific tuberculous action obtains, it is very possible that, in a large proportion of cases which are judiciously treated, amendment will speedily ensue, especially if the general health be well sustained. In such cases, the most convenient form appears to be the combination of iodine with an alkali, in the salt known as the iodide of potassium, provided it is advisable to diminish or remove the glandular mischief, independently of any other complication. The employment of this salt is often attended with the most encouraging and satisfactory results. Experience has taught me that it is, as a rule, administered in small but repeated doses more advantageously than in larger ones. This, I believe, is now an almost universally received opinion, and one that is commonly acted upon, not only in this country, but on the Continent: and so important did M. Lugol consider the administration of small doses, that he rarely prescribed more than one grain of iodine, and sometimes less, to be taken in the course of the day. M. Baudelocque is even more reserved in his use of the drug, and commences with an eighth of a grain, or a little more. Two modern writers (Drs. Smith and Ranking), to whose works I have already referred with advantage, are even still more conservative in prescribing the maximum doses of iodine; and doubtless their opinions, as well known practical physicians, have served very materially to moderate the large quantities of this drug which were formerly thought actually compulsory to obtain the desired effect. My own plan in children's cases is to give grain or half-grain doses of iodide of potash twice or thrice in the course of the day, increasing or diminishing the quantity in accordance with the requirements of individual cases. For general purposes, I prefer adopting the forms which have been so beneficially employed by M. Lugol, and which I extract from Dr. Ranking's practical treatise on *Scrofula*.

No. 1. Iodini gr. $\frac{1}{2}$; potass. iodidi gr. 1 $\frac{1}{2}$; aquæ \mathfrak{z} vij.

" 2. " gr. 1; " " grs. 2; " "

" 3. " gr. 1 $\frac{1}{2}$; " " grs. 3; " "

There is no doubt in my own mind that the action of iodine is more advantageously obtained when the drug is combined with an alkali, in the form recommended by this distinguished French practitioner, and I speak from considerable practical experience. The actual quantity of iodine that it is expedient to employ before the system becomes so influenced as to obtain resolution of glands enlarged in the incipient stage of tuberculosis is, as slight consideration will at once suggest, very uncertain. No definite rule can be laid down. Individual cases require independent treatment; and the skill of the surgeon must be invoked on every occasion in which it is deemed expedient to employ the medicine. In some cases I have used, with immediate beneficial results, very small quantities of iodine; while in others it has been necessary to continue increased doses for a very considerable period. I have already mentioned an instance in which the employment of iodine was extended over a period of four to five months before direct advantage ensued; and I have met with various examples which have shown me how important it is not to lead patients to anticipate with too much hopefulness the advantages to be derived from a limited and moderate course of the drug. When iodine has been given for some time, and no adequate advantage has been obtained, it is usual to suspend its administration for a period, and by other treatment endeavour to remedy the cause which, in all probability, prevents its beneficial operation. I have constantly found that the good effects of iodine have been established after the use of an emetic and a course of gentle purging; and it is now my common practice to have recourse to such proceedings, provided I fail to obtain, after a fair trial, those advantages from the drug which, after due consideration, I had a right to expect. I shall not give any cases to prove the correctness of what I have stated; but I have in my note-book many, the recital of which would at once show how irregular is the action of a medicine which is too often administered with almost blind credulity. As the enlargement that precedes the deposition of tuberculous material is slow in progress, so also is the restoration of the affected glands when reduced by iodine to their normal condition and size.

Besides the preparations of iodine with potash, it is usual to resort to its combinations with other substances. The iodide

of sodium has been employed by some practitioners, but I have myself never resorted to its use. Iodide of ammonium has been recommended lately by my friend Dr. B. W. Richardson, and was formerly employed by Baudelocque. I have made trial of its efficacy, and my experience enables me to speak somewhat definitely of its value. M. Gamberini of Bologna (*Bulletino delle Scienze Mediche; Gazette Hebdomadaire*, June 1st, 1860; *BRITISH MEDICAL JOURNAL*, June 30th, 1860) has of late made an extensive use of the preparation, and states that it is indicated in all cases where the other iodides are of use; and that it produces a rapid cure. It is seldom that intolerance follows its administration; but when it does, the symptoms denoted are violent pains in the throat and heat in the stomach. The dose is from two to sixteen grains daily; but I cannot believe that such a large amount as the latter quantity is ever needful. The advantage of the iodide of ammonium over other iodides is, that its action is more rapid, and the dose generally smaller.

Often in the administration of iodine, from various circumstances, it is expedient to combine it with some mineral tonic, especially in the cases of delicate children, the subjects of glandular disease. There is no preparation which is so beneficially employed as the combination of iodine and iron, in the form of the *syrupus ferri iodidi* (*Phar. Lond.*), when such necessity exists. Quantities varying from half to a whole teaspoonful may be most advantageously exhibited twice or even three times a day, especially when combined, as will be presently stated, with cod-liver oil. I am in the habit of making extensive use of this medicine, particularly in cases of incipiently enlarged tuberculous glands in the poor and ill-nourished children who apply at the Great Northern Hospital; and the drug is also in the same favour with the majority of my colleagues at this institution and at Margate.

I am not aware of any very definite experiments having been made as to the value of this preparation in the various states of tuberculous glands; but I cannot avoid alluding to the results obtained by Dr. Cotton, one of the physicians to the Brompton Consumptive Hospital, in his treatment of twenty-five cases of phthisis pulmonalis. Dr. Cotton arrives at the conclusion that, "although iodide of iron is very far from exhibiting what might be termed a *specific* effect, it nevertheless seems to act very beneficially in a fair number of consumptive cases, especially in those where the disease is only in an early stage." (*Med. Times and Gazette*, June 16th, 1860.) The analogy between tubercle of the lung and lymphatic glands may perhaps serve to show the value of the medicine in the latter form of disease.

The iodides and biniodides of lead and mercury have been strongly recommended by some surgeons, as possessing considerable advantage in the treatment of various forms of *scrofulous* glands. When a syphilitic taint exists with the more chronic malady, the iodides and biniodides are certainly powerful remedies, and have been much extolled by M. Ricord and other continental surgeons; but if such complication do not exist, perhaps, little real advantage is to be gained by the internal administration of either.

The therapeutic effect of iodine has very lately attracted considerable attention in the Academy of Medicine in Paris, owing to the statement made by M. Rilliet of Geneva, that small doses of it cause iodism. Opposed to this assertion are the opinions of some of the most eminent of the Parisian school. M. Velpeau states that he must have given iodine, in varying doses, to upwards of fifteen thousand patients during his professional career; and that he has never seen iodism produced. In two instances, flesh was lost; while occasionally coryza and ptyalism resulted; but the mamma and testis were never influenced by even the largest amount that was exhibited. (*Lancet*, April 16th, 1860.) My own experience tallies with that of this distinguished French surgeon. I have never met with an instance in my own practice in which any destructive influence was exerted over the normal tissues of the body. I have, however, often read of its precocious absorptive properties; but have happily failed to become personally acquainted with them. It is not unusual for too large and frequent doses of the medicine to produce nausea, loss of appetite, giddiness, browache, lassitude, and a mawkish state of the breath. On the other hand, iodine, in proper and judicious quantity, tends to impart health and increased functions to many of the tissues of the human frame.

Bromine. Bromine has been substituted for iodine by some practitioners, under the supposition that it possesses more direct influence over the various stages of tuberculous and scrofulous glands. M. Kopp of Hanau has given great attention to an

extended trial of this drug, and has no hesitation in stating that, as a general rule, he conceives its effects are inferior to those of iodine. In combination with potash, it has obtained, however, great notoriety, as forming one of the principal virtues of the waters of Kreuznach. It is doubtful if bromine in any form is as useful as iodine. It has been argued that its administration can be pushed to a greater extent than is possible with iodine, and that its effects are more rapid than those of the sister drug. I am unwilling to allow my own individual experience of this medicine to influence others, as, I conceive, I have not sufficient evidence to permit of any definite deductions being drawn as to its stated virtue in glandular tuberculous disease.

[To be continued.]

Transactions of Branches.

BATH AND BRISTOL BRANCH.

DELIRIUM TREMENS.

By EDWARD L. FOX, M.D., Physician to the Royal Infirmary, Bristol.

[Read September 27th, 1860.]

ONE form of delirium has given the name to a special disease, "delirium cum tremore," "delirium tremens," "delirium tremefaciens." It may be distinguished from what Dr. Peddie calls "delirium ebriosum," in which an acute maniacal attack supervenes on one fit of intoxication, and is commonly induced by some depressing emotion. This latter state is characterised by a ravenous longing for more drink, and by maniacal delirium. It may be distinguished also from delirium traumaticum; for, although this latter condition may be purely delirium tremens, yet it may be delirium ebriosum, and it may still more often be a typhoid delirium, which is a symptom of the sympathetic fever which occurs after injuries in persons whose blood is full of alcohol. Delirium tremens is of the most varied intensity. External impressions at the commencement of the disease have only in a slight degree lost their power in directing the course of mental activity. The patient is over busy in his daily work. He feels that he is incompetent for its adequate performance, and shrinks suspiciously from his incompetence being remarked by others. He overdoes things—is too elaborate in his carefulness. He is restless and cannot keep still. Sleeplessness commences; and, after a night or two of much restless disquiet, he remains in bed, imagining that he is performing his work, or anxious to undertake it; and he lies in a state of almost perpetual motion, with eyes staring open, and often in a condition of the utmost complacency. This condition, however, will lapse into or alternate with one in which he will experience many of the horrors of a lost soul. He sees a thousand demoniac shapes grinning in triumphant malice at having won him as their prize; he hears their laughter of savage glee, and feels their arms encircling him to bear him down to the regions of the damned; or he is tormented by hideous insects or reptiles covering the bedclothes, and crawling on his limbs; or he may be enwrapped in the coils of a serpent, and every motion of his body may seem to hasten the moment when the reptile's fangs shall be darted into his flesh; or loathsome spiders of hideous proportions run over his limbs, whilst toads of preadamite size sit constantly on each side of his pillow.

By night and day, the illusions and hallucinations persist. Without ceasing for a moment, he goes on raving and trembling, and all restraint rouses him to fury. Sometimes indeed "the horrors" may be wanting, and the patient lies calm day and night in a placid condition, busy indeed and full of delusion, interpreting his attendants as boon companions, but feeling aggrieved at being considered an invalid.

In considering the nature, the pathology, and the treatment of the disease, it may be possible to arrive at the true understanding of this *vexata questio*.

1. *Nature.* 1. It is not inflammatory. No exudation nor other inflammatory product has ever been found at a *post mortem* examination. 2. There is neither of necessity hyperæmia nor anæmia. 3. The disease must therefore come under that division of delirium included under the head of toxæmia.

What, then, is the poison in the blood? The answer has usually been "alcohol." There is no doubt that excess of alcohol is in all cases the predisposing cause of the disease.