

A NOTE UPON THE USE OF THE MULLEIN PLANT IN THE TREATMENT OF PULMONARY CONSUMPTION.

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FROM time immemorial, the *Verbascum thapsus*, or great Mullein, has been a trusted popular remedy, in Ireland, for the treatment of the above formidable malady. It is a wild plant—most persons would call it a weed—found in many parts of the United Kingdom; and, according to Sowerby's *British Botany*, vol. vi, page 110, is "rather sparingly distributed over England and the south of Scotland." In most parts of Ireland, however, in addition to growing wild, it is carefully cultivated in gardens, and occasionally on a rather extensive scale; and this is done wholly and solely in obedience to a steady popular call for the herb by phthisical sufferers. Constantly, in Irish newspapers, there are advertisements offering it for sale; and there are, in this city, pharmaceutical establishments of the first rank in which it can be bought. Still, it does not appear in the *Pharmacopœia*; nor, as far as I know, has its use received the official sanction of the medical profession. Some friends with whom I talked over the matter at the Pharmaceutical Conference at Southampton last August, suggested that it would be desirable to make a therapeutical research into the alleged powers of this drug, and ascertain by actual experiment its efficacy or otherwise. Having partially accomplished this, I am anxious to very briefly set forth what has been done, in order that others may be induced to co-operate in the work.

There are five mulleins, all belonging to the parent order of the Scrophulariaceæ; but the old Irish remedy is the great mullein or *Verbascum thapsus*, a faithful delineation of which will be found in Plate 1437, vol. vi, of Sowerby. It is a hardy biennial, with a thick stalk, from eighteen inches to four feet high, and with very peculiar large woolly and mucilaginous leaves, and a long flower spike with ugly yellow and nearly sessile flowers. The leaves are best gathered in late summer or autumn, shortly before the plant flowers. In former times, it appears to have been rather highly thought of, particularly as a remedy for diarrhœa; and Dioscorides, Culpepper, and Gerard favourably allude to it.

Having been furnished with a good supply of fresh mullein from a garden near this city, where it is extensively grown, I commenced operations. As it proved useful, subsequent supplies were procured from our drug-contractor.

The old Irish method of administering the mullein is to place an ounce of the dried leaves, or a corresponding quantity of the fresh ones, in a pint of milk; to boil for ten minutes, and then to strain. This strained fluid is given warm to the patient, with or without a little sugar. It is administered twice a day; and the taste of the mixture is bland, mucilaginous, comforting to the præcordia, and not disagreeable. I resolved to try this method, and also the watery infusion; and, moreover, the natural expressed juice fortified with glycerine. This latter preparation was carefully made for me, from fresh mullein leaves, by Dr. John Evans, chemist to the Queen and the Prince of Wales.

Some phthisical sufferers, of whom there are here, alas! too many, were now admitted from time to time into St. Vincent's Hospital. They were admitted in all stages, from an early one to the most advanced. On each admission, the case was carefully examined; the history, symptoms, and physical signs were exactly noted; and the patient was weighed on a stage balance of great accuracy. The patient was put as much as possible on the mullein treatment only. For obvious reasons, no cod-liver oil, koumiss, or other weight-producer was given; the patients got the diet suitable to such sufferers; and, if the special symptoms became troublesome, received appropriate treatment. As much as possible, however, they were left to the mullein—a proceeding which was entirely satisfactory to themselves. In addition to the admission-weighing, they were carefully weighed every week, and care was taken that this should be done as nearly as possible on the same day and hour, with the same clothes, and, in fact, as much as could be under the same conditions. In securing this, the patients anxiously co-operated; and it was frequently amusing, but sometimes painful, to watch the satisfaction or chagrin with which the weekly result was received. I must here tender my acknowledgments to our zealous, attentive, and accurate house-surgeon, Mr. Denis P. Kenna, by whom this important, but tedious, duty was discharged.

I annex a brief statement of patients so treated, with particulars of their cases and the results obtained.

CASE I.—Elizabeth S., aged 22, single, resident governess at Kildare, was admitted November 8th, 1882. She had been ill for six months, with severe cough and profuse night sweats. The catamenia had ceased from the outset of the illness. There was a cavity with tubular breathing, and moist crepitus under the left clavicle. Tubercular bacilli were found in her sputum. She was put on mullein twice a day. On November 16th the cough was much relieved, and the dyspnoea diminished. The perspirations were unchecked. They were stopped by the hypodermic use of atropia sulphate. On December 4th, cough and breathing were much relieved. As death was evidently approaching, the weighings were discontinued. On January 8th, 1883, she died very peacefully of pure exhaustion, and without any dyspnoea or pain. The weighings were, on November 9th, 1882, 93 lbs. 8 ozs. On November 14th, 1882, her hair was cut short, reducing her weight 5 ozs. On November 16th her weight was 90 lbs. 8 ozs.; on the 24th, 90 lbs. 8 ozs.

REMARKS.—From the beginning this case was hopeless, and an early termination evident. To those familiar with such cases the relief to the cough and dyspnoea was clear and distinct. The diminution of the distress to be expected at the closing scene was evident.

CASE II.—Richard C., aged 45, married, a farmer, of Meath, was admitted November 8th, 1882. He had been phthisical for two years, during which time he had suffered from cough, with occasional attacks of hæmoptysis and of night sweats. The apex of the left lung was dull, with tubular breathing and moist crepitus. There was no dyspnoea. Mullein was given twice daily. On November 18th his cough was much easier; he felt much improved. On November 24th an improvement continued. On December 1st he left the hospital, saying that he would continue the treatment at home. I was unable to ascertain whether bacilli were present, as my dyes did not arrive till after his departure. The results of weighing were, November 9th, 146 lbs. 4 ozs.; November 17th, 143 lbs.; November 24th, 144 lbs.; December 1st, 144 lbs.

REMARKS.—This patient's case was unfavourable. He was not troubled with the hæmoptysis or night sweats while with us. He left with a much better opinion of his future than we had. The relief to his cough was very evident.

CASE III.—Sarah O. F., aged 29, married, no family, a dress-maker in Dublin, was admitted November 9th, 1882. She had been phthisical for the last five years, and had chronic cough and occasional hæmoptysis; the catamenia were irregular and scanty; there was dulness under the right clavicle, with diminished respiratory murmur. Mullein was given twice daily. On November 17th she left the hospital at her own request. The cough was much improved. Her weight had increased from 102 lbs. 8 ozs., on the 10th, to 105 lbs. on the 17th.

REMARKS.—This was an average case of chronic phthisis, and the relief obtained was considerable.

CASE IV.—Margaret R., aged 26, single, a servant at Dublin, was admitted November 14th, 1882. She had been phthisical for three months, with cough and emaciation. The catamenia had ceased. There was dulness under the left clavicle, with moist crepitus. Mullein was given twice daily. On November 28th she left at her own request. The cough was much improved, and her weight increased. The results of weighing were, November 15th, 98 lbs.; November 22nd, 101 lbs.; November 29th, 102 lbs. 4 ozs. and December 6th, 105 lbs. 12 ozs.

REMARKS.—This was a rather acute case, but was taken in time. The relief and improvement were evident.

CASE V.—Martin G., aged 24, single, a draper's assistant in Dublin, was admitted November 13th. He suffered two years ago from severe hæmoptysis; since when he had been ailing. It returned on November 12th, and it was for this he was admitted. When it was checked, we discovered dulness under the left clavicle, with moist crepitus. Mullein was given twice daily. His weight on November 20th was 114 lbs. 2 ozs; on November 28th, 114 lbs. 8 ozs.; December 4th, 116 lbs. 4 ozs; December 7th, 117 lbs. 8 ozs.

REMARKS.—This patient had a very great tendency to diarrhœa, which the mullein checked most effectually. His cough was also benefited.

CASE VI.—Patrick N., aged 28, single, a labourer, residing in Dublin, was admitted December 18th. He had been phthisical for two years, having occasional hæmoptysis and profuse night sweats, which latter were at once checked by atropia. There was dulness under the left clavicle over a large area, with cavernous breathing

and a cracked-pot sound. Phtisical bacilli were present in the sputum. He also suffered from anal fistula. His weight, on December 19th, 122 lbs. 4 ozs.; on the 30th, 124 lbs. 8 ozs.

REMARKS.—In this case the cough was much benefited.

CASE VII.—Julia N., aged 23, single, of no occupation, was admitted December 24th. She had been phtisical for three years, and had severe cough and occasional hæmoptysis. The catamenia had stopped for six months. There was dulness under the left clavicle, with moist crepitus. Mullein was given twice daily. The records of her weight are, December 26th, 84 lbs. 8 ozs.; January 2nd, 1883, 85 lbs.; January 9th, 83 lbs.

REMARKS.—This patient is still under the mullein treatment. The relief of the cough is very great.

I have set down the above cases simply in the order in which they occurred, and with no view of supporting any preconceived idea. These cases, although too few to justify any general conclusion, appear to establish some useful facts. The mullein plant boiled in milk is liked by the patients; in watery infusion it is disagreeable, and the succus is still more so. The hot milk decoction causes a comfortable (what our Gallic neighbours call *pectorale*) sensation, and when once patients take it, they experience a physiological want, and when the supply was once or twice interrupted, complained much in consequence. That it eases phtisical cough there can be no doubt; in fact, some of the patients scarcely took their cough mixtures at all—an unmixed boon to phtisical sufferers with delicate stomachs. Its power of checking phtisical looseness of the bowels was very marked, and experiment proved that this was not merely due to the well known astringent properties of boiled milk. It also gave great relief to the dyspnoea. For phtisical night-sweats it is utterly useless; but these can be completely checked by the hypodermic use of from the one-eightieth to one-fiftieth of a grain of the atropia sulphate; the smaller dose, if it will answer, being preferable, as the larger causes dryness of the pharynx, and interferes with ocular accommodation. In advanced cases, it does not prevent loss of weight, nor am I aware of anything that will, except koumiss. Dr. Carrick, in his interesting work on the koumiss treatment of Southern Russia (page 213) says: "I have seen a consumptive invalid gain largely in weight, while the disease was making rapid progress in her lungs, and the evening temperature rarely fell below 101° Fahr. Until then I considered that an increase of weight in phtisis pulmonalis was a proof of the arrest of the malady." If koumiss possesses this power, mullein clearly does not; but unfortunately, as real koumiss can be made from the milk of the mare only, and as it does not bear travelling, the consumptive invalid must go at least to Samara or Southern Russia. In pretubercular and early cases of pulmonary consumption, mullein appears to have a distinct weight-increasing power; and I have observed this in several private cases also. Having no weighings of these latter, however, makes this statement merely an expression of opinion. In early cases, the mullein milk appears to act very much in the same manner as cod-liver oil; and when we consider that it is at once cheap and palatable, it is certainly worth a trial. I will continue the research by careful weighings of early cases; and will further endeavour to ascertain whether the addition of mullein to the cultivating solution prevents the propagation of the phtisical bacillus.

THE INCUBATION OF SCARLET FEVER.

By W. TONGE SMITH, M.D.,

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MR. SWEETING, in spite of the very obvious criticisms which have been showered upon his interesting cases, has inspired me with the boldness of adding my mite to the discussion on the "Incubation of Scarletina".

Of course, mere exposure to infection does not necessarily mean infection of the person so exposed, any more than that a chemist need be poisoned because he is in constant contact with poisons. In the one case, as in the other, the poison must somehow or other get into the body first, and in a sufficiently large dose, and it must find that body unprotected.

To fix the incubation period of any of the acute specific diseases, it is essential to have a known definite exposure to infection, of short duration, followed by isolation up to the time of the development of the disease; and this is precisely that which it is most difficult to obtain. But though most cases, like Mr. Sweeting's, fall short of this standard, I venture to think that they are not without interest. Unfortunately, I cannot now lay my hands upon all my cases, but

the following series is fairly representative. Some, it will be seen, come up to the above standard, and will, I think, satisfy even Dr. Cullingworth, unless he should ask me to show that these patients had never been exposed to infection in the whole previous course of their lives. The only possible reply that I could give to such an inquiry would be, that neither the patients nor their friends could throw any further light on the subject, although they were questioned closely and set a-thinking. The cases are, therefore, offered for what they are worth.

CASE I.—S. B., certified as scarlatina, was brought to hospital in a scarlet fever ambulance on the evening of May 30th, 1879. He was found to have morbilli, and was isolated. May 31st. The rash of morbilli had almost disappeared. June 1st. Temperature 99°; he felt quite well. June 2nd, 8 A.M. Temperature 103.2°; headache and sore-throat. 11 A.M. Scarlet rash, etc. Incubation, about sixty hours.

CASE II.—H. H., on the morning of October 30th, 1879, met friends at Regent Circus, and rode with them in an omnibus to the Marble Arch. There he left them, and had no further communication with them. He had not had anything to do with them for some weeks previously, as some members of the family were ill with scarlatina. Two of those whom he met had themselves been taken ill with scarlatina about three weeks before. The boy continued well till November 2nd, 1879, when, in the morning, he had sore-throat, followed by rash, etc. Incubation, about seventy-two hours.

CASE III.—J. O'B., certified as having scarlatina, was brought from an important hospital and medical school, and was said to have been isolated some days. He reached the London Fever Hospital at 11 A.M. on November 4th, 1879. There was no sign of scarlatina or other acute specific disease. On faith in the authority (I very soon got over faith in the authority), I myself put the patient in the scarlet fever ward. No symptom of anything wrong appeared until November 7th, when, at 9 A.M., he had sore-throat, and his temperature was rising. At 1 P.M., he had scarlatinal rash, etc. On the 10th, desquamation was beginning. Incubation, seventy hours, not more.

CASE IV.—G. H. was sent in with Case III, at the same time, from the same place, under the same conditions, and by the same authority. There was no sign of illness. In a credulous mood, I myself put the patient in the scarlet fever ward. There was no sign of scarlatina whatever till November 17th, 1879, in the afternoon, when he had sudden vomiting, sore-throat, etc., followed by scarlet rash; temperature 103.4°. He desquamated subsequently. Incubation, thirteen or fourteen days (?) not more, certainly. These were the only two cases sent in; both recovered perfectly.

CASE V.—A. R., certified as having scarlet fever, was placed in the scarlet fever ward on the afternoon of December 24th, 1879. On December 26th, he was feverish at night. Temperature normal. On December 27th, during morning, the temperature was 101°; in the afternoon, he had sore-throat, rash, etc. Incubation, about sixty-four hours, not more.

CASE VI.—J. R., certified as having scarlet fever, had an hour's drive in a scarlet fever ambulance between 5 and 6 P.M. on December 27th, 1879. On arrival at the London Fever Hospital, he was found not to have scarlatina, and was isolated. At 7 P.M. on December 30th, the temperature was 99.8°, followed by sore-throat, vomiting, scarlet rash, etc. Incubation, about seventy-two hours.

CASE VII.—A young lady visited a dressmaker on February 11th, 1880. She saw there a sick child (the mother said it had sore-throat). She went again on February 12th to have her clothes fitted, and again saw the child. On February 15th, she was attacked with scarlatina. Incubation, about seventy-two to ninety-six hours.

CASE VIII.—A sister of the above left home before her sister was attacked, and in consequence stayed with a friend. She visited the same dressmaker on March 10th, 1880, at 5 P.M. On March 12th, she went again to be fitted. On the 15th, she had sore-throat, etc., followed by scarlatinal rash. Incubation, about seventy-two to one hundred and twenty hours.

Since getting the above facts of these two cases, I have been told that possibly there may have been another source of infection common to both sisters—that of a young lady who had an illness which her friends thought might have been scarlatina, but which the medical attendant said positively was not.

CASE IX.—M. P., nurse at the London Fever Hospital, arrived on April 1st, 1880, at night. On April 2nd, at 7 A.M., she for the first time entered the scarlet fever wards, and remained on duty in these wards until April 5th, when, shortly after 7 A.M., she suddenly had sore-throat, etc., followed by rash. Temperature 103°. Incubation, about seventy-two hours, not more.