## OCCASIONAL NOTES OF THE QUARTER.

### *Hypodermic Injection of Morphia.*

Several correspondents have communicated to us their experience of the subcutaneous injection of morphia (see "Notes on Lunacy in France," in the October number of the Journal). We invite further communications on this important subject; and especially cases in which large doses have been administered, whether to the sane or insane.

Dr. T. B. Worthington, Senior Assistant Medical Officer, Sussex County Asylum, writes:—

In reference to a conversation I had with you about the amount of morphia I had seen given subcutaneously, I now write to say that I have since ascertained from perfectly reliable sources that the greatest amount given in twenty-four hours was 14 grains, and that in the week, of which that was one day, 85 grains were administered. The patient had cancer of the uterus, and I do not think I ever saw any one suffer such acute pain as she did, and it was in the attempt to alleviate her agonies that the dose was increased to such proportions. A peculiar coincidence is that she was a French woman by birth, but had lived many years in England. The only unpleasant constitutional symptom from which the patient suffered was obstinate constipation. There was never any nausea or vomiting. The seat of the injection was the outer side of the upper arm and shoulder; the leg was once tried, but it caused great pain and twitching in the limb. The preparation of morphia used was the acetate; the reason it was chosen being that it is so much more soluble than the hydro-chlorate, their relative solubility being acetate 1 in 6, and the hydro-chlorate 1 in 20.

To D. H. Tuke, M.D. T. B. Worthington, M.B.

Dr. McIntosh, the Superintendent of the Perth District Asylum, writes:—

The statement made seventeen years ago in advocacy of the restricted use of the injection of acetate of morphia in every asylum as one of the "most effective opiates, as calmative to the depressed and despairing," and the expression of its great value "where restlessness, excitement, and dirty habits occur at paroxysmal periods," can now be endorsed and extended by ample experience.

The largest dose administered was ℿxvii of the following solution:*—

Morph. acet., gr.x
Acid. acet. glac. q. s.
Aquæ. ℥ij.

(A few minims of liq. potassæ are added, so as to render the fluid nearly neutral.)

* "Journal of Mental Science," 1860. It gives about gr. j in ℿxv.

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I have not, however, given so large a dose (mxvii) for many years, since by attention to collateral circumstances such is not necessary. I never inject more than once a day, and would not recommend any other procedure. Tinct. Canabis Indicæ is generally used to supplement the initiatory smaller doses, the first being almost invariably miij, so as to avoid any possible accident from idiosyncracy or otherwise. After an interval it is also well to reduce the dose (if it has been large) and the same with a fresh solution.

One of the most singular features is the fact that since the somewhat interesting case of narcotism (followed, however, by both mental and physical recovery), which occurred in Murray's Asylum in 1861,* after a comparatively brief essay amongst the patients of Dr. L. Lindsay, who kindly permitted the experiments, not a single instance of the kind has happened in the much larger area to which the method has been extended since the opening of this asylum early in 1864. Thus the dread of this little operation, which for one reason or other still lingers in the minds of a few, may surely be disposed of.

The drug has been administered almost daily for a month or two, and in several cases at the same time; and its effects have, further, been carefully compared with many other remedies and methods of treatment. Moreover, the favourable results obtained have been observed by some whose previous teaching had rendered them sceptical. It is only necessary before administration to make a careful survey of the general condition of the patient (especially of the circulatory and nervous systems), and to maintain efficient supervision thereafter. Pulse, respiration, and pupil should invariably be investigated by the medical officer within an hour, due regard of course being paid to the quiescence of the patient; and no reliance should ever be placed on any non-medical opinion of the condition of the case. The latter is a vital point. As a rule, those who are restless at night have the hypodermic injection between 7 and 8 p.m., and thus are medically supervised at least twice before 10 p.m. In other cases it is well to avoid injecting near meal hours, especially breakfast and dinner, though this rule is not imperative. Special care of all such cases is, of course, in addition, constantly taken by the attendants.

Inattention to various little details in the mode of injecting sometimes causes failure. Thus I have known very little effect follow a fair dose, simply because the needle of the operator was plugged, and the fluid intended for the subcutaneous tissue forced upwards into the barrel, or out of the point above the needle; and a similar result sometimes occurs when the point of the instrument is imbedded in the tough cutis. Again, the fluid should not be kept too long, and it should, though slightly tinged, be free from sediment. I have, indeed,

* *Op. cit.*, p. 412. This case is the more to be regretted, since I believe it caused my accomplished friend, Dr. Lauder Lindsay, to lose confidence in this method.

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noticed that a practitioner has returned a good solution to the druggist, because it had become granular; yet a drop or two of glacial acetic acid rendered it all that was needful. If the dose is of any strength, its effect, sooner or later, rarely fails to ensue. A noisy night may occur, but next day the patient will be very much improved, and, according to circumstances, a dose of Tr. Canabis Ind., a drink of warm beer, a game at cricket or football, or a long walk in the open air before bed time, will probably suffice next evening.

The excellent instruments now supplied for hypodermic purposes simplify the procedure very much; and by having a small stoppered bottle, with an aperture wide enough to admit the barrel of the syringe, the requisite quantity may be drawn in before the needle is screwed on. The most convenient spot for injecting is near the insertion of the deltoid, the needle being thrust perpendicularly through the skin, the point then turned downward for some distance into the subcutaneous tissue, and the fluid injected. It is not now necessary to do more than hold the point of the finger for a moment over the puncture, after withdrawing the needle. No local disturbance of any kind was ever observed.

It is not to be supposed from the foregoing remarks that the drug is given where it might be withheld. On the contrary, it is considered even more successful to promote convalescence without such aid. Moreover in this, as in most modern asylums, several weeks will occasionally pass without a call being made on the hypodermic or any other method of administering sedatives or hypnotics, the whole house after 8 p.m. being so quiet that only the heavy breathing of the sleepers or the tick of the clocks is heard.

In conclusion, I have no hesitation in recommending the discreet employment of the hypodermic injection of the acetate of morphia in the practice of the alienist physician. The evil effects stated to have been observed after its use have never come under my observation; on the contrary, the hypnotic and sedative results have been, on the whole, very uniform and eminently conducive to the comfort or recovery of the cases. Indeed, my opinion of its utility has never varied, and I should not like to continue my practice in the department without its aid.

To D. H. Tuke, M.D. W. C. McIntosh, M.D.

We have recently seen some cases treated hypodermically at St. Luke's Hospital, under Dr. Mickley's care. In one, a patient labouring under puerperal melancholia with attacks of excitement, the dose of hydro-chlorate of morphia was increased from gr. $\frac{1}{8}$ ter die on August 13th to gr. $\frac{2}{3}$ on the 31st. On September 6th, gr. iv$\beta$ were injected in the day. The drug controlled restlessness and induced sleep. Her mental condition improved. On the 11th, gr. vj were injected in the day. It was then reduced to gr. iv a day, on account of too much sleep being induced. The dose was raised until Octo-

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ber 15th, when it reached gr. iij ℥ thrice daily. She was very sleepy. Her mental state was a little improved. The remedy was now discontinued till November 14th, during which time she lost ground, and was noisy and destructive. Morphia was again injected, beginning with gr. ij. There was a good deal of sleepiness induced. It should be stated, that through the whole time of treatment, the appetite was not affected, and she only once vomited. The morphia treatment was not pursued further. The patient was restless, and did not appear likely to be further benefited.

In another case, one of melancholia with suicidal tendency, morphia was first given by the month (gr. ⅓ ter die, increased up to gr. j). The patient was quieted. Half grain doses were then injected and increased gradually up to gr. iij twice daily. There were no ill effects. It was then suspended, the result of the experiment being that the patient became restless again.*

[We should be glad if any of our readers who have used the prolonged warm or tepid bath would send us the result of their experience.—D. H. T.]

## PART II.—REVIEWS.

*The Lunacy Blue Books.*

*Thirty-second Report of the Commissioners in Lunacy (England), ordered to be printed 2nd August*, 1878.

*The Twenty-seventh Report of the District Criminal and Private Lunatic Asylums in Ireland*, 1878.

*Twentieth Annual Report of the General Board of Commissioners in Lunacy for Scotland.* 1878.

The matter most pointedly to be noted in the English report, is the steady progress in the numbers of the registered insane, and in the means provided for their care and treatment in the lines laid down for a number of years past.

The increase of the year is represented by 85 males and 10 females among the private, and by 774 males and 1,033 females among the pauper patients. Among the private patients this increase for the year has been below the average of the last ten years; among the paupers it has been somewhat above the average; while, if we take both classes together, it will be found that the actual increase now stated has been exceeded on four previous occasions during the 20 years of fully-re-

* These particulars are taken from notes entered in the case-book by Mr. John F. Woods, the clinical assistant.

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