

The following table is added for the convenience of those who may be interested in this research. No explanation of it is needed :—

Ages in Years.	Proportion of persons at different ages in 1,000 of the whole population of Scotland above ten years of age.	Proportion of persons in asylum at different ages in 1,000 of the whole population of Scotch Asylums.
From		
10 to 15	148.9	1.8
15 to 20	134.3	18.3
20 to 25	117.0	50.8
25 to 30	101.9	87.2
30 to 35	88.1	116.7
35 to 40	75.7	127.0
40 to 45	70.3	127.8
45 to 50	59.0	118.6
50 to 55	53.9	105.2
55 to 60	42.0	83.6
60 to 65	39.4	68.3
65 to 70	27.0	45.0
70 to 75	21.8	31.7
75 to 80	11.5	16.3
80 to 90	8.5	3.1
90 to 100.....	0.7	0.5
100 and upwards.	0.08	

Uses and Abuses of Chloral Hydrate.—By GEO. H. SAVAGE, M.D., London.

In a short paper like the present I cannot pretend to exhaust the chloral subject, but I hope very definitely to express my opinions, and also to give the grounds on which I have formed them.

A remedy like chloral has to pass through two periods of trial before its real value is determined.

It was announced as a grand sleep-giver, a drug that gave perfectly natural sleep, and produced no evil effects, did not require an increasing dose, in fact, was what half those earning their bread by their brains required.

In my opinion the drug has signally failed in every one of the promises made for it, but, perhaps, I represent the second

period of trial, the period of unbelief, if so I shall be glad of facts that will adjust the balance.

I should begin by saying that, as a sleep producer, it is powerful, but sleep is not the one thing needful to cure insanity, and sleep may be obtained at too dear a price. A recent writer said we had passed from a time of physical restraint to one of medical restraint. I do not think the profession has passed, but I confess to believing that great risk has been run, and that without energetic protest the harm will be done.

We must not quiet our patients for the sake of quiet. If they get well more rapidly without chloral, I prefer to have them noisy and sleepless.

There is a great difference in treating patients, whether at their homes or in asylums. It may be both necessary and judicious to quiet in the former, and not in the latter, and if quiet is essential, chloral is no worse than some other drugs.

In asylums for acute cases chloral is not necessary—in my opinion—and often is harmful.

I shall consider chloral, first as a possible cause of insanity, and next as a remedy.

As a cause, I have seen its constant use for one or two years produce melancholia, associated with great prostration, loss of flesh and strength, a sallow, worn aspect, great irritability and nervousness, with strongly suicidal tendencies: I have the experience of several personal friends, men who were working hard with their brains, and who suffered from sleeplessness. These found chloral a boon at first, but by continuing its use they lost in physical health, and the sleeplessness became more unbearable.

It is rather difficult to explain this more active sleeplessness, but, doubtless, many of my readers know the less distressing stages of it. The chloral-taker often on going to bed, after a hard day's work, feels not only unable to sleep, but actively, restlessly wakeful, so that he is unable to remain more than a minute in one posture. There is no special or pleasing flow of thought, no equal brain activity, but often a feeling of depression, and a dreadful impulse to injure oneself without any object or any cause of woe.

This impulse was described rather as a feeling like the one impelling people to throw themselves from heights.

In assuming that chloral was a cause of insanity, I must admit that often it was only one cause. The chloral-taker was sleepless from brain exhaustion, or brain irritation, from

over-work or over-stimulation, and in some cases had insane inheritance, but this is true of many other causes. A shock or a blow may only produce insanity under similar circumstances. I have seen one case of insanity follow the suicidal taking of an enormous dose (two ounces), by a person used to excess of stimulants and the habitual use of chloral. This case became slowly weak-minded, and did not recover. In this case there was doubt expressed by at least one authority on the part played by the chloral, as there were added other serious causes of trouble, but the fact remains that till the large and almost fatal dose was taken, marked insanity was absent.

In several other cases the prolonged use of increasing doses of chloral seemed slowly to develop ill health and melancholia, accompanied by refusal to take food. In one the husband took a fatal dose, and his wife, who was also chloral-taker, became insane.

In another, an elderly woman exhibited, in an exaggerated form, the dread and agitation common to those using the drug, and had to be fed by the stomach pump. She slowly lost strength in mind and body, and was discharged uncured.

Though these are in no way peculiar in their form of insanity, I am convinced the cause was chloral. Of course I do not believe that patients are made insane in asylums by the use of the drug, as the outside world has supposed, but I am convinced that many cases of acute insanity are injuriously affected, and, in some instances, allowed to die through the use of chloral. A large proportion of the cases of puerperal insanity that are now admitted into Bethlem have passed through a course of chloral treatment, which means that they have been dosed into quietness, till they have refused food. Such cases take longer in recovering, and are more troublesome to treat, from their physical exhaustion and their refusing food.

Having so far only expressed my dislike to the drug, or, in other words, spoken of its abuse, I would pass on to say what I believe to be its uses.

It has been used in—1st, sleeplessness; 2nd, in various forms of insanity; 3rd, in several stages of epilepsy. In reference to the first, I have seen sleep produced by chloral, when the wakefulness was not due to pain, but if this sleeplessness were the initial stage of insanity, I have not seen the attack warded off by the sleep. In a few cases where over-work or anxiety is affecting the health, a single dose of

twenty-five grains at bedtime is of service, but I should rarely give it regularly.

For simple sleeplessness in the brain-worker, who has little or no bodily exercise, sleep may be induced, and work got through that could not have been done without some sleep, but, in my experience, this is done by drawing on the capital of energy, and if pursued will end disastrously.

In a few sleepless persons chloral seems to act uniformly well, and does not require increasing doses, and does not affect the appetite or general functions. In such cases it may be of great service.

I believe, however, that simple sleeplessness is much better treated by other general measures before chloral is tried.

2nd. In some cases of maniacal excitement the patients are controlled and made manageable. According to some authorities the sleep induced in some of the most violent of such cases saves them from death by exhaustion. This seems probable, but in practice I find stimulants and abundant light food act just as well.

In some cases of recurrent mania with great violence, the drug has been given in large and repeated doses, gradually increasing, till at length we have reached two drachms every four hours, and no beneficial result has followed.

In melancholia one does not get good results by either occasional or regular administration.

In general paralysis I have not dared to give the drug any long trial, as I felt that I was running the danger of removing one stone from the tottering structure.

In cases of insanity following blows, shocks, and the like, I believe excitement is produced much like that produced by alcohol in cases of injury to the head.

In acute insanity with intemperance, a few cases were relieved by chloral.

In speaking above of the treatment, I refer to my experience of chloral alone. In some future papers I may speak of its combination with other drugs.

In the third group I place epileptics, and with these I have greater faith but less experience.

I know of no good results following the use of the drug in simple epilepsy, but in patients who have furor associated with the fits, the benefit is very great and very certain.

I have frequently seen a case that without chloral was dangerously maniacal, for several days sleep quietly, after thirty grains of chloral, and wake up sane, having had an

epileptic fit but no furor. Every fit that was not followed by a dose of chloral was followed by a fit of mania.

I have now expressed my belief, which may be summed up to be that chloral may produce physical ill health, hypochondriasis and insanity. It may relieve epileptic furor, but cannot cure epilepsy. It may produce sleep in some cases with advantage, but more commonly disadvantageously. It may be used as restraint rather than as treatment in violent cases.

Five Years of Statistics.—By P. MAURY DEAS, M.B. Lond.,
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The object which I propose to myself in this paper is two-fold. The first is to lay before you briefly the general statistical results of five years, in regard to those who have been sent for treatment from the districts of Cheshire, to which the asylum is allotted; and the second is to give the results of some further experience, as bearing on the question of "Local Differences in the Distribution of Insanity," of which I adduced some illustrations in my Annual Report for 1873, and which were subsequently published in a separate form in the "Journal of Mental Science" for April, 1875.

In regard to the first division of my subject, that of the general statistics, I wish to explain at the outset that the plan on which I have drawn them up has special reference to the question of the increase of insanity.

In the address which I delivered on the Prevention of Insanity, on assuming the chair as President of the Society in November last, I said, while discussing the great and steady *apparent* increase of insanity, that "there are, at present, I believe, no reliable data for determining the important point whether the *incidence* of insanity is on the increase; that is to say, whether the number of *new* cases arising each year is increasing in a greater ratio than the population, although I think that it would not be difficult to set on foot a statistical enquiry in relation to the classes, at any rate, from which our County Asylums are fed, which would go far to settle the point."

At present there are very great divergencies of opinion in regard to this question of the increase of insanity; and if

* Read at a Meeting of the East Cheshire Medical Society, April, 1878.