TABLE X.—Results of the Cases of Melancholia (19).

	Recovered	Per Cent.
Under 3 months	16	84.2
From 3 to 6 months	3	—
6 " 9 "	6	—
9 " 12 "	3	—
1 " 2 years	2	—
2 " 3 "	—	—
3 " 5 "	2	—
Remaining chronically insane	3	16.8
Died	0	—

TABLE XI.—Results of the Cases of Acute Delirious Mania (7).

Recovered (1 in 3 months, 1 in 6½ months)	2
Remained chronic	2
Died (2 in 3 weeks, 1 in 1 month)	3

TABLE XII.

Ages of all the Cases.		Per Cent.
15 to 19 years	7	9.59
20 to 24 "	16	21.91
25 to 29 "	23	31.5
30 to 34 "	12	16.43
35 to 39 "	9	12.33
40 "	6	8.22
	73	100

TABLE XIII.—Showing the Number of Labours in 73 Cases.

		Per Cent.
1	37	50.68
2	12	16.43
3	6	8.22
4	6	8.22
5	4	5.47
6	2	2.74
7	4	5.47
8	2	2.74
	73	100

TABLE XIV.

Types of Disorder in Relation to Ages.	15 to 24	25 to 34	35	Total.
Mania	18	20	9	47
Melancholia	3	10	6	19
Acute delirious mania	2	4	1	7

TABLE XV.—Results in Relation to the Duration of the Disease on Admission to the Asylum.

	Recovered.		Died.		Became Chronic.	
	Mania.	Melancholia.	Mania.	Melancholia.	Mania.	Melancholia.
Within a week	15	—	1	—	2	—
Between one and two weeks	16	—	3	—	—	—
Between two and three weeks	2	2	1	—	—	—
Between three and four weeks	1	2	—	—	2	—
Over a month	7	11	—	—	4	4

MEDICAL SOCIALISTS.—We learn from the New York *Medical Record* that a number of East Side practitioners holding Socialistic opinions are forming a league having for its object the nomination of Socialistic candidates for public offices.

ETHYL CHLORIDE AS A GENERAL ANAESTHETIC IN CONJUNCTION WITH ETHER.

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HAVING followed the correspondence of some time back in relation to ethyl chloride, it is interesting to note the growing feeling that the administration of the drug is by no means so easy, neither is it so free from risks, as at one time some were inclined to think.

Although admitting that a certain proportion of fatalities were due to unsuitable cases, others, perhaps, to want of experience on the part of the administrator, yet there are doubtless some which will not admit of this explanation. I have given the drug about two thousand times, and have had one case that for a moment gave me a little anxiety.

The patient was a male, aged about 20, apparently healthy. The anaesthetic was given for the extraction of about five teeth. Time, 10.30 a.m. He had been told by his dentist to take no breakfast. The amount of ethyl chloride inhaled was 3 c.cm., given by my apparatus and method as described in the *BRITISH MEDICAL JOURNAL*, April 23rd, 1904.

When almost under and I should have removed the face-piece in another two or three inspirations, he quite suddenly became very pallid, the eyelids lost their tone, and the pulse and respirations became feeble. The mask was immediately withdrawn, and he rapidly regained colour, the pulse and respiration improving together.

By way partly of treatment and partly to enable the dental surgeon to complete his work, the bag was emptied of the vapour, the ether inhaler applied, and he rapidly became anaesthetized. This was done without any trouble, as he had not yet recovered from the previous administration. All went well. On recovery he vomited to the extent of demonstrating that he had partaken of a hearty breakfast: but I am sure that his symptoms were largely cardiac and not due to incipient vomiting, as at the time he was too deeply under for that to occur, although doubtless his loaded stomach contributed to a condition in which, had he not been closely watched, there is little doubt that rather an alarming state of affairs might have rapidly followed.

Such a case as this would emphasize that which I wrote in the *BRITISH MEDICAL JOURNAL* over three years ago, namely:

As with the administration of other anaesthetics, so with ethyl chloride, caution and experience are required to satisfactory anaesthesia, a minimum of after-effects, with safety to the patient. I would strongly recommend intending administrators to see it given by an experienced anaesthetist and to administer it under his guidance several times and to several types of patients before attempting to give it to his own patients.

To most of those who have been interested in this drug the similarity of the anaesthesia to that of deep chloroform must have occurred, and with that in view it has been my practice for some time past to combine the vapour of ethyl chloride with that of ether in varying proportions. As far as I am aware there has been no fatality in the ethyl chloride-ether sequence or mixture.

In giving this sequence and mixture extensively from 1902 it has been my habit to get in ether as soon as the patient can bear it, and I would submit that if ether were more generally used in conjunction with ethyl chloride—and especially by those of only moderate experience—there would have been fewer fatalities to deplore.

For short surgical operations requiring one inhalation I use one of two methods and apparatus, as will now be described.

Method I.

A wide-bore ether inhaler of the Clover pattern, devised by Dr. Hewitt and modified by myself.¹ I introduce a measured quantity of ethyl chloride, which is given slowly; the ether chamber is charged with about half an ounce of ether. When signs of unconsciousness begin to show themselves I administer as much of the ether as is possible.

The inhaler described is particularly adaptable for this procedure, having a wide bore, and a large evaporating surface in the ether chamber—which is not entirely enclosed with a water jacket—so that we are enabled to present to the patient a strong vapour.

As with the ether in the C.E. or A.C.E. mixture, so in this instance the object is to produce its stimulating effect, although I think that in some cases the anaesthesia is prolonged thereby. My usual dose of ethyl chloride is $2\frac{1}{2}$ c.cm., but I now find that in certain cases in which a long anaesthesia is required I can give more than this, and I think, using this method, there need be no fear of anaesthetizing in the erect position. The advantages in dental and certain surgical work of this position are so great that it will be a pity if all ethyl chloride cases must be conducted in the recumbent position.

Method II.

When in Capetown it was reported to me by the makers of my inhaler that some practitioners complained that in using it the glass tube was occasionally blown from the tap. This has never occurred in my experience; I cannot say if it is due to faulty construction of the apparatus or to want of familiarity in its working; but I did find that in working in a temperature of say, 90° F., there was some loss by evaporation in filling the tube. It therefore occurred to me to introduce into the tube a few drops of ether, the object being to cool the tube before introducing the ethyl chloride, and also by mixture to prevent loss. This was done by way of filling a used 60 c.cm. "ethyl anaesthetic" (Duncan) bottle with ether. With the warmth of the hand and a little shaking a good flow from the bottle is readily produced. I then put in my $2\frac{1}{2}$ c.cm. as before, and the anaesthesia was the same as if no ether had been present. This led to several experiments, and eventually I found myself giving $2\frac{1}{2}$ c.cm. of ether and the same quantity of ethyl chloride.

It will be at once said that the evaporation is unequal, that is, the ethyl chloride comes off first and the ether at the end. This is only partly correct. It is surprising how quickly the ether evaporates. Let this mixture be made (the tube should of course be shaken), and let the tube be emptied into a one-gallon bag, and in a room of the temperature of, say, 65° F., it will be observed that the evaporation of both is complete in a few seconds.

But by passing the mixture through the metal tube and tap gradually, a larger percentage of chloride of ethyl will be presented to the patient on account of the metal surface it has to flow over. The inhaler used is well suited for this purpose.² It is claimed that this unequal evaporation is the condition desired, seeing that we first give a vapour largely composed of ethyl chloride, and later, when the depressing effects of ethyl chloride may show itself, the stimulating qualities of the ether will be manifest. At this later stage the ether will be more freely inhaled on account of the quicker and deeper respirations.

A breath of air may be given with advantage, and with less risk of lightening the anaesthesia.

I have hardly given a sufficient number of cases to give statistical results, but my object in writing is to direct the attention of anaesthetists to the latter method, as perhaps some might like to go into the matter with special reference to the proportion of the two drugs in order to secure the best results and their relative evaporation.

REFERENCES.

¹ BRITISH MEDICAL JOURNAL, October 10th, 1903. ² Ibid., April 23rd, 1904.

NOTES ON A CASE OF QUININE HAEMOGLOBINURIA OR BLACKWATER FEVER.

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S. H., aged 28, an Austrian, was admitted to New Somerset Hospital, Capetown, on April 17th, 1906. The previous history of his illness is so interestingly described in his own words that I have thought it best to include it in this report as it was written down by himself, and it is as follows:

"History of My Present Disease.

"The first attack of malaria fever occurred in March, 1903, when I was crossing the Nasai-Stepe (open flat country inhabited by a nomadic tribe of natives, the Nasai) on my way to Victoria Nyanza, German East Africa. Soon after I had sunstroke, with which I laid more or less senseless for about twenty days at a friendly native village without any attend-

ance, the result of which was that when I have been found by another European traveller, my back has been in pitiable state. This European has seen to my safe conduct to the nearest military station, where I stayed for six months before my wounds have been completely healed. In the meantime I started to rid myself of the malaria parasites by following the treatment advised by Professor Koch of Berlin (every ninth and tenth day 1 gram of quinine first thing in the morning) for two months, after which time the malaria symptoms completely disappeared.

"At the end of August, 1903, being restored to health, I left this place and travelled among the different tribes for about three months, during which time I was enjoying perfect health without taking quinine or any other medicines. In November, while travelling among the warlike tribe 'Wanyaturus,' my caravan has been attacked in a forest by about 600 natives, some carriers of mine have been killed outright and the rest run away with the exception of one boy, with whom I reached the nearest military station after travelling day and night through forest for four days, and living on wild fruit all this time. At the station I arrived in exhausted condition, and the military doctor has found me in high feverish state in which I remained for about five days.

"When my temperature has settled to normal I commenced taking quinine as above stated, until one morning, disregarding the fact that my temperature has been on the rise, I took quinine, with the result that half an hour later I passed urine of very dark colour. The doctor upon arrival advised me to drink as much of mineral water, weak tea, etc., as possible, which advice I followed, and the urine got within twenty hours completely clear. The doctor had on this occasion told me not to take any quinine if my blood is in normal state, therefore I waited until my temperature was normal for two to three days in succession and took quinine again, half an hour later I had blackwater fever again. The treatment has been similar to the one above stated.

"After this I have not taken any more quinine, although I have suffered from malaria attacks, which have been of short duration without any after-effects, very often until I had a very heavy attack of seven days' duration. I could not retain any food in my stomach; in the morning the temperature has been lower, towards evening it gradually increased, accompanied by continuous vomiting and rigorous shivers, until about 10 p.m. it has reached its highest point, never less than 41.5° C. After I've got better the doctor has advised me to try quinine again, beginning with a very small quantity, and gradually to increase the same, as that was in his opinion the only way to reduce the enlargement of the liver and spleen, and to rid me at the same time of the malaria parasites. I expressed my doubts of being able to take any quinine without getting blackwater fever, upon which the doctor pronounced his willingness to administer the quantity of quinine personally; to this I consented. He gave me about one-tenth (1-10th) of a tabloid containing 0.5 gram first thing in the morning, half an hour after I had taken it I had blackwater fever again; all this time the doctor has not moved from my bedside. On this occasion my body has taken on a yellow colour which did not happen on the previous occasion.

"After this I gave up the treatment altogether. I continued to suffer from malaria attacks, but never longer than a couple of hours' duration. On my wanderings about the country I came to a station where the doctor has been greatly surprised at my anaemic appearance, and asked me the reason. I explained to him, but he only laughed at my explanation, and said if I were to put myself under his treatment he guarantees to put me right, referring at the same time to some people who have been treated by him under similar circumstances. I have, needless to say, thankfully accepted his offer. He gave me one-fortieth part of a tabloid (0.5 gram) quinine first thing in the morning. Result: Half an hour later I had blackwater fever; treatment same as before. This attack has been followed by dysentery, from which I suffered for about five weeks, having had three relapses. Soon after I left German East Africa, and travelled extensively in North-Western Rhodesia, British Central Africa, and Portuguese territory, until at last I came back to Salisbury. Ever since the attack of dysentery I had no more fever attacks, and have enjoyed perfect health for about fourteen months. After my arrival in Salisbury I began to be troubled with after-effects of dysentery, and came in search of medical assistance to Somerset Strand, Cape Colony, at which place I consulted Dr. Waldron, who has advised me to go to New Somerset Hospital, Capetown, which advice I followed."

Condition on Admission.

The patient is a somewhat spare man, markedly anaemic, and showing signs of chronic malarial poisoning. The spleen was enlarged and tender, and extended about 4 in. below the costal margin in the nipple line. There was slight dilatation of the heart, and the first sound terminated in a soft systolic murmur, heard best at apex. There was also slight enlargement of liver. He had suffered from dysentery prior to admission, and when in hospital there was some mucus in the motions, which were three or four in number in the twenty-four hours. There was also a certain amount of tenesmus. The urine was quite clear, acid reaction, specific gravity 1024, and contained neither albumen nor blood. The temperature was normal night and morning. The patient was