

referring to these it will be seen that the total hæmoglobin at once falls on commencing the exhibition of the fluoride; and on stopping the administration of the drug it slowly rises again towards the normal standard, its previous amount being nearly attained in twelve days.

A like result follows the use of sodium fluoride (*vide* Chart V.), and the acid (*vide* Chart VI.) in health.

In disease an alteration of a similar kind is seen to occur, as shown in column 5 of Tables II. and III., on the use of ammonium fluoride and the acid in enlarged spleens. In the case of acute rheumatism treated by ammonium fluoride (Chart VII.) the fall is more considerable than in any of the others; but as before noted, this may be in part due to the concurrent pyrexia.

It will be seen that the hæmoglobin suffers reduction to a very much less degree than the red corpuscles, the consequence being that these latter by acquiring a larger proportion of hæmoglobin than in health have their 'functional value' correspondingly increased. That the corpuscles in pathological conditions may contain a greater amount of hæmoglobin than in health, has been clearly shown by Malassez, but the converse is what usually obtains in most forms of anæmia.

It is a matter of general experience that during qualitative blood-changes—other than the immediate effects of actual hæmorrhage, the hæmoglobin, as a rule, alters in quantity only very slowly; and is much less capable of sudden variations than the corpuscular element. It is therefore just possible that a more prolonged course of large doses might result in a relatively greater fall in the hæmoglobin. But the ordinary effect of the administration of the acid and the alkaline fluorides, as has been shown, is exerted much more on the corpuscles than on the hæmoglobin.

In the relatively slight decrease of the hæmoglobin under their use lies the comparative safety of these substances as possible remedial agents. For, should the hæmoglobin, on which the functional activity of the corpuscles so largely depend, have been diminished in ratio at all similar to the corpuscular decrease a much more grave anæmic condition would be established, and one which would have opposed a serious obstacle to the advisability of their employment in medicine.

IV. Alteration in the Number of the White Corpuscles.

Gowers has represented the normal average of the white corpuscles at .3 per hæmic unit* of the hæmacytometer, *i.e.* 1,500 per cubic millimetre of blood. But Dr. Jos. Hunt† considers this estimate to be above the average, and proposes that .2 per hæmic unit be taken as the standard. My experience in this matter accords with that of Dr. Hunt.

The state of the white corpuscles during the exhibition of hydrofluoric acid and the fluorides is shown in the charts and tables already given.

In the 'proving' statistics no distinct deviation beyond physiological limits is apparent.

In the lad with goitre (Chart V.) where a degree of leucocytosis existed, the apparent effect of the fluoride of sodium was to cause a distinct reduction of the white cells—nearly to normal standard.

In the case of acute rheumatism (Chart VI.), in which the leucocytes were increased to a about three times their normal amount, a slight fall was evident during the use of the fluoride.

In the cases of enlarged spleen, where ammonium fluoride and the acid were given in very small doses, no decided effect was apparent; nor can any positive inference be drawn from the results of enumeration in the cases where ferrous fluoride was given under similar circumstances.

It may here be noted that no pigmentation of the white cells occurred even when the reduction in numbers of the red discs had reached its lowest ebb—the hæmoglobin per corpuscle being at the same time relatively high.

A MIRROR OF HOSPITAL PRACTICE.

CARBOLIC ACID POISONING.

BY A. NEVE, L.R.C.S. & P. EDIN.,
Kashmir Medical Mission.

The following case, my only experience, may be interesting. A hasty call was received at the Cowgate dispensary, Edinburgh, to attend a woman who had been poisoned. Within five minutes of the call, probably within ten minutes of the poison having been taken, I was on the spot. A woman of about fifty lay in a state of deepening coma upon a bed. A bottle on the shelf was pointed out to me as having contained the cause of her condition. It was marked 'Lotion,' and smelt of carbolic acid, and an ounce of which remained. There was no doubt about her having taken some of this. When seen the following was her condition:—

She lay prostrate upon the bed, with relaxed muscles, but occasional convulsive spasms of the hands. The head was twisted towards the right side. The eyes were closed; lifting the lids the pupils were observed to be intensely contracted; they were scarcely larger than a pin's head. There was diminished reflex sensibility of the eyeball. Her mouth was open, with much froth on the lips; and the cheeks puffed out with every expiration; the respirations being slow, 15 per minute, and stertorous. The pulse was small and compressible, about 75 per minute, but irregular. The breath smelt strongly of the acid, but there was no white stain as from corrosion on lips or in mouth. She could be somewhat roused from the comatose condition.

Treatment.—An ounce or two of olive oil was administered, and a fifteen-grain dose of Sulphate of zinc was twice repeated; some of this was not swallowed, and shortly after most of it, with some particles of undigested food, was rejected. The evacuated matter smelt of carbolic acid. The condition of the patient did not improve, and our efforts were directed to rouse her by means of application of cold, galvanism, ammonia, etc. She began to groan and roll about, and appeared improving. About an hour and a half after our first call, she again vomited and her senses began to return; after watching by her for some little time longer we were able to leave her under the care of her friends.

Next day she had recovered; but suffered for two days from severe gastro-intestinal irritation.

From her own statement we learnt that she was addicted to whisky drinking, and being partially intoxicated, had mistaken the bottle; that she had drunk about three ounces of the lotion, and had at once felt violent pain in throat and stomach; and had scarcely staggered to the bedside when her senses left her. By her statement the quantity swallowed was 3 ozs of a 1—40 lotion; this would contain about 36 grs. of the pure carbolic acid. A small quantity of this was rejected by the stomach afterwards; but enough had been absorbed to bring her to the very verge of death. For twenty-four hours the urine gave abundant proof of the presence of carbolic acid.

* The 'hæmic unit' equals 2 squares of the hæmacytometer, and represents the percentage of health.

† *Lancet*, p. 90, Vol. II., 1880.

This is a rare form of carbolic acid poisoning; most of the cases being from wound absorption; or, if from the mouth, resulting from the crude commercial acid, when the caustic effects are prominent.

Kashmir.

A CASE OF HEPATIC ABSCESS TREATED BY DR. G. C. ROY, RECOVERED AFTER FREE OPENING AND DRAINAGE.

[REPORTED BY CIVIL HOSPITAL ASSISTANT HURI MOHAN BHATTACHARJI.]

M. N., aged 30 years, a Mohirri, attached to the Deputy Commissioner's Office of Manbhoom, came under treatment in the month of November last. He stated that in April 1882 he had a slight attack of fever, and recovered from it after suffering for a week. About a fortnight after his recovery he began to feel himself feverish towards evening, and in the course of a month his appetite became impaired, with loss of health. He derived much relief from the treatment of the Civil Surgeon; but in September last the fever returned with greater intensity followed by enlargement of the liver, which could be distinctly felt below the costal margin. The liver began to increase rapidly, and in a short time encroached upon the greater portion of the left hypochondriac region. About the middle of September he had a severe fit of ague, after which the Civil Surgeon gave his opinion that an abscess had formed in the liver, and proposed to empty it by aspirator. As the patient is a native of the district of Beerbhoom, he preferred to come here for treatment.

Condition before operation.—The patient looked much emaciated and anæmic. Was never addicted to alcoholic drinks. Walked with a stooping gait with his head inclined to the right side. No fever. Pulse weak and quicker than natural. Right side of abdomen much distended, and the edge of the liver could be felt at the umbilicus. Fluctuation could be felt all over the organ, but most distinctly about 2 inches below the right costal margin, which was the most prominent portion. Bowels regular. Appetite fair. Eyes judiced.

Operation.—On the 27th November the abscess was emptied by Dr. Roy with an aspirator under carbolic spray and 40 oz. of thick pus freely mixed with shreds of yellowish gelatinous membrane, which seemed like broken cyst walls, was drawn out. On microscopical examination no echinococci or hooklets could be discovered, and the yellowish membrane appeared to be disintegrated liver tissue.

Ordered Pulv. Ipecac. c. opio—Twice a day.

28th November.—Slightly feverish. Pulse 132. Temperature 101°; could not sleep last night.

Acid Nitric Dil.	...	...	℥ x
Quinæ Sulph.	...	...	gr. ii.
Tr. Ferri	...	...	ʒ i.
Tr. Cannabis Indica	...	...	℥ v.
Mucilage G. A.	...	...	ʒ i.
Aquæ Cinnamomi	...	...	ʒ vi.

ʒi three times a day.

29th November.—Feels better. Pulse 120, temperature normal. Feet œdematous. No collection of matter.

Add Tr. Digitalis ℥ v. to each dose of mixture; Tr. Iodine to be applied over the liver.

3rd December.—Abscess filling up again. Feet more œdematous. Complains of cough, which is very troublesome at night.

Continue mixture.

Cod liver oil with the Ex. of malt 2 spoonsful twice a day.

5th December.—Cough more troublesome. Abscess rapidly filling up. In other respects same as reported last.

Add to the mixture ℥ xv of Tinct. Hyoscyamus instead of Tinct. Cannabis.

7th December.—Cough still very troublesome. Œdema of feet increased. Is very anæmic.

The abscess was emptied again by aspirator under anti-septic spray and about 4 pints of thick offensive matter drawn out. The character of the matter was the same as before.

Continue medicine with Tr. Ferri increased to ʒii per dose.

8th December.—Is in the same state as reported last.

Quinæ sulph.	...	...	gr. v.
Port wine	...	...	ʒss hft.

B. D.

Continue other medicines.

12th December.—The abscess filled up again; cough still very troublesome. Œdema of feet increased, in other respects same as reported last, only there is more emaciation.

The abscess was opened with a large ordinary trocar under spray according to instruction of Dr. Roy, but only about 4 oz. of matter came out. On examination it was discovered that the opening of the canula was completely blocked up by the gelatinous looking substance. The canula was taken out and the abscess emptied by the aspirator. The quantity of matter drawn out was about a pint, which looked more yellowish than on former occasions, and contained a good deal of gelatinous stuff.

15th December.—Looks more emaciated; œdema of feet almost disappeared. Cough less troublesome; expectoration free. Pulse small and weak, 128; appetite impaired.

Continue medicine. Increase the port wine to 2 oz. daily.

18th December.—Pulse still weak, 130. Bowels regular. Appetite fair. No regular fever but a hectic condition.

The abscess was emptied again under spray. At first a large ordinary trocar was introduced, but as the matter did not come out through the canula, the aspirator canula was introduced through large canula and about a pint of thick pus mixed with gelatinous matter was sucked out which had no fœtor. During the operation the aspirator canula was blocked up several times. After operation a plug of rag as thick as an ordinary quill was introduced into the cavity to keep the external opening patent.

Increase the Port wine to 3 oz. daily.

20th December.—The patient is in the same state. Pulse feeble and frequent. No cough. Appetite fair.

The abscess emptied again in the same manner as before and about a pint of matter drawn out. After operation the external opening was a little enlarged with a scalpel and dressed.

Continue medicine. Increase the port wine to 4 ozs. daily.

22nd December.—Feels much better. Is able to walk about the house. No cough, no more fever. Appetite fair.

The plug was taken out and only a small quantity of matter came out.

The abscess was emptied by the aspirator and about a pint and half of a deep yellow coloured matter drawn out. Considerable difficulty was experienced in introducing the large canula for the purpose of washing out the cavity with carbolic lotion, as the opening in the liver was found to have retracted from the line of external opening after the abscess was emptied. Continue medicine and dressing.

24th December.—The patient is improving. The abscess was again emptied to-day. On taking out the plug very little matter flowed out, so it was emptied by aspirator. The quantity of pus drawn out measured about a pint and half; it was thin and yellowish, and contained very little gelatinous matter. The cavity was well washed out with carbolic lotion. No plug was inserted into the cavity, as the large trocar could not be introduced easily.

26th December.—The patient is doing well. Appetite good; bowels regular. No more fever; no cough. Still looks emaciated. Pulse same as reported last.

The abscess was emptied by an aspirator. The track of the first opening could not be made out either by the director or aspirator canula, so a fresh opening was made and about a pint of thin yellowish pus was drawn out. The matter was free from smell and gelatinous stuff. The cavity was well washed as before, and the canula was taken out, which caused a little bleeding.

31st December.—Doing well. The abscess was emptied by aspirator and about a pint of healthy pus slightly tinged with blood was drawn out and the abscess was washed and dressed.

2nd January, 1883.—The patient is improving. Discontinue the former mixture and continue—

R Ferri Pot. Tart.	...	gr. x.
Tr. Calumbæ	...	℥ xx.
Acid Nit. Dil.	...	℥ x.
Tr. Nucis Vomiceæ	...	℥ v.
Tr. Aurantii	...	℥ xv.
Aquæ ad.	...	ʒ i

ʒi. three times a day;

4th Jan.—The patient is in the same state as reported last. There was a little accumulation of matter in the abscess. Continue medicine.