ally ceased to cry and toss about, her expression was one of extreme relief, and before I had finished she was sound asleep. She slept soundly for two hours, and there was no return of the symptoms on waking. In the morning the temperature was normal. She was kept in bed for three days and under observation till August 11th, and had no return of the fever. The arsenic and quinine mixture which she had been taking before were continued.

CASE X.—A. H., aged 3½, was suffering from malarial fever aggravated by neglect and exposure to the sun. Her mother stated that she was subject to ague, and had had fever for two days. She had not been kept in bed, and she would not take any medicine. I was called in at 11 P.M. on August 26th, 1896, and found the child quite delirious. The temperature taken in *mx* of creosote at once, and the effect was almost instantaneous; the delirium ceased rapidly, she became conscious, then was very irritable for a few minutes, and in a few minutes more was quite comfortable and quiet. In half an hour the temperature had fallen 2 degrees. She slept soundly for two hours, and fairly well for the rest of the night. On August 27th, 1896, at 7 A.M. the temperature was 100° F., but rose to 105° at 10 A.M., with internal strabismus and commencing convulsions. The inunction of creosote (*mx*) repeated gave immediate relief. Some creosote and oil were prescribed in *mx* doses, to be rubbed in if the temperature rose again over 102°, but the mother, becoming impatient, rubbed it in five or six times in the course of the next twenty-four hours. This indiscretion, however, was followed by no bad results. The temperature fell to normal on the morning of August 29th, without any other treatment. There was no recurrence.

Though I regret that I have been unable to keep notes of other cases, I do not think it necessary that anything should be added to this record to prove the value of the treatment. My object is simply to bring it to notice, particularly in the interests of the last class of cases, which are frequently found so very difficult to treat by other means. Personally I never now answer a call to a sick child night or day without taking a small bottle of creosote with me. In this way time is saved, which perhaps could never be made up if lost.

It appears to me to be an ideal treatment for malarial fevers in children, as it combines everything that is necessary, even in very severe cases; it is easily applied; it acts rapidly and continuously, and, as far as my experience goes, with certainty; and I have never seen any bad effects, even after the excessive use of the drug. I need only allude to the possibilities of treatment of the more malignant forms of malarial fevers by the external or internal administration of this drug.

FIVE CASES OF SO-CALLED BLACKWATER FEVER.

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THE following five cases have occurred in this district within the last two years. A typical case is as follows:

A European tea planter, aged 23, had felt feverish for a few days preceding April 8th, 1899, on which date he passed about 8 ounces of urine having the appearance of porter, and containing albumen. The skin and conjunctivæ were jaundiced. He had pain in the dorso-lumbar region and joints, and felt very weak. There was slight headache, and he had had bilious vomiting for a few hours. He was sweating freely. There were no other abnormal physical signs. A rigor with vomiting came on while he was being examined, so that it was not possible to take his temperature. Quinine bihydrochlorate gr. iij given hypodermically at once, with liq. hydrarg. perchlor. *mx* given at ten-minute intervals, soon checked the vomiting. Lithium benzoate was also given, in gr. v doses, every two hours while awake. During the following twenty-four hours two more gr. iij doses of quinine were given hypodermically, and the temperature fell from 99.4° on the second day to 99° on the third, after which it had a considerable range from subnormal to normal until the eleventh day, when it reached 100.2°, but the continued use of quinine then brought the temperature to normal. The smallest quantity of urine passed was 17 ounces on the fourth day, but by the fifth day it had increased to 43 ounces daily, when the lithium benzoate was stopped. The colour of the urine varied from that of porter through various shades of reddish brown. On the fourth day there was no trace of albumen. He sweated freely and slept well throughout. An occasional soap enema was necessary. His diet consisted of milk diluted with soda-water or lime-water in small quantities every few minutes, vermicelli, sago, and tapioca. A full bottle of champagne was taken during twenty-four hours for ten days. Animal food was given as soon as the urine was free from albumen. Quinine was given hypodermically from the eleventh to the twenty-first day. The patient was then given Easton's syrup 3ij daily, and was advised to leave this malarial place and to take a sea voyage.

Four months ago an educated Bengali had a similar attack, for the symptoms and treatment of which the preceding case will well stand as a type. He made a good recovery. For the first eight days I tested his urine, which varied from 1 ounce on the second day to an average of 1 pint during the next six. The first specimen was neutral, the remainder acid; the specific gravity varied from 1020 to 1013, and I failed to detect in it any sugar, bile pigments, or bile salts. It contained about

one-fifth of albumen at first, but this was absent on the fourth day. Microscopically no blood corpuscles could be detected, but the urine (more especially the reddish-brown sediment) was full of what appeared to be pale yellow granular casts, which noticeably decreased in amount as the urine became lighter coloured. I regret to say that I had no means for the detection of blood-colouring matter.

I have also treated three other cases in Europeans which were fatal.

In the five cases the highest temperature was 103.7° and the highest pulse-rate 108; the greatest amount of albumen was one-half. There was sometimes slight diarrhoea during the attack. The prostration was marked in all, and there was a tendency to syncope on attempted movement. In all cases also there was dark grass-green bilious vomiting, with uncontrollable hiccup in one of them, slight enlargement of the spleen in one case; there was no enlargement, pain or tenderness of either the spleen or liver. Of four Europeans, one was big built and flabby, while three were muscular and strong-looking men. Three had been free from malaria for some time previously, but three had had a great deal of mental worry preceding the attack. None had taken large doses of quinine.

The hypodermic method is undoubtedly the best method of administering quinine in such cases, and lithium is retained in the stomach much better than the more usually employed diuretics. Liq. hydrarg. perchlor. appears to be the most serviceable drug to allay the vomiting, for which purpose a soap enema is usually a great aid, and a mustard plaster on the epigastrium also gives a very satisfactory result. On account of the syncopal tendency a stimulant mixture is generally needed.

From my own experience and inquiries it seems that this is a very rare complaint amongst natives, who are in the habit of stating that they pass blood in the urine when it is merely of a high colour due to malaria. On the other hand, it has been suggested with strong probability that, owing to the ignorance and carelessness of the large majority of local native practitioners in diagnosing it, the disease is not so rare amongst them as is usually supposed.

Blackwater fever differs from malaria accompanied with bilious vomiting so common in this district in (1) the character of urine; (2) the temperature not running so high, seldom above 101°; (3) the muscular weakness and prostration; and (4) the syncopal tendency. But, in spite of these differences, the two complaints have very similar symptoms, and the idea suggests itself whether the differences do not depend more on degree than character, and whether they may not both be due to very similar, if not the same, causes.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

ULCERATION OF COLON IN TYPHOID FEVER.

THE following case I think worthy of note chiefly on account of the length of time that elapsed between the probable date of perforation and that on which death took place, but also for the extensive perforations of the large intestine.

The patient, a boy aged 7 years, was admitted into the Foleshill Infectious Hospital on May 18th, 1898. The temperature on admission was 99°, and he was thought to be in the second week of typhoid from the history. The temperature next morning was 101.2° and then rose during the next five days with but three morning remissions to 104° at 5 P.M. on May 24th. It regained then the ordinary remittent type, not rising above 102°, the diarrhoea at this time having become very troublesome, eight or nine times in the twenty-four hours, was only checked by starch enemata. On May 27th a swelling with a good deal of cutaneous redness was noticed in the umbilical region, reducible on pressure; under poultices the redness disappeared and the swelling decreased in size; in two days however a great increase took place and the tissues became much inflamed; peritoneal abscess was diagnosed and about 4 ozs. of foetid pus removed by aspiration on May 31st. The swelling reappeared however in a day or two as large as