In each case chlorine water in the following mixture was administered:

R. Aqua chlori	...	...	...	m iv
Quin. sulph.	...	...	...	gr. ½
Salol	...	...	...	gr. iv
Mucilag. tragacanth.	...	...	...	q.s.
Aqua chloroformi	...	...	ad	3j

Dose: 3 ss to a child under six months, and proportionate doses in elder children.

This was given every six hours for the first twenty-four to thirty six hours, and then thrice a day until the stools were normal. In addition, 10 to 20 m, according to age, of the following mixture was administered twice a day:

Ol. ricini	...	...	...	3j
Ol. olivae	...	...	...	3j
Tinct. opii	...	...	...	m ij

The opium, however small the dose, has a soothing effect upon the bowels, and helps to induce a much-needed rest, which is an important factor in treatment. Lavage of the bowel with normal saline was resorted to in many cases.

In the very severe cases, where the child was admitted in a collapsed state, with depression of the fontanelle, cold and dry skin, blue extremities, sunken and heavy eyes, and general flabby condition, a mustard bath was first ordered, to be followed immediately by injection of pituitrin $\frac{1}{4}$ c.cm., repeated two or three times at intervals of four hours. Then an inunction of warm olive oil was given to diminish loss of heat from the skin. Lavage of the bowel was practised two hours after the mustard bath. The diet in these cases varied according to the severity of the attack. In the milder cases albumin water and barley water were sufficient. In the more severe cases sherry whey was given first until the vomiting ceased.

The majority of cases recovered in four to five days, the very severe in ten to twelve days. In the latter it was often necessary to administer brandy in 10 to 20 m doses every two to four hours, as an additional check to collapse, and in such cases also during convalescence I have found thyroid, grain $\frac{1}{2}$ twice a day, useful in helping to accelerate recovery and increase weight, as recommended by Dr. J. Simpson of Edinburgh.

The essential difference between the treatment adopted and that which is in common use was the administration of chlorine water; and a comparison of the cases which received this with those treated without it has strongly disposed me in its favour. Time and facilities did not permit systematic bacteriological investigations, and no explanation of the action of chlorine is attempted, but clinical results were so striking as to justify a recommendation of this treatment.

Out of the fifty-three cases so treated there was one relapse and only one death, upon which unfortunately an autopsy was not allowed. As soon as the vomiting and diarrhoea had ceased, and the children considered well enough, they were placed on a milk mixture adapted to their age and condition, gradually increased in quantity and strength, and their weight regularly recorded. Before discharging the patients one or other of the infantile proprietary foods was given, suitable to their digestion, so that they became accustomed to an article of diet they were likely to receive at home.

A CASE OF CAESAREAN SECTION COMPLICATED BY RUPTURE OF THE UTERUS.

BY

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A SHORT account of an unusual complication in a case in which Caesarean section was twice done may be of interest.

Caesarean section was performed on Mrs. B., aged 26, by me in April, 1913, owing to contracted pelvis; she was delivered of a dead child, weighing 10½ lb.

She again became pregnant, and I saw her in consultation with Dr. Brown in June, 1917. I advised waiting until labour commenced and her admission then to the Royal Infirmary for a similar operation. Labour began on August 8th at 4.30 a.m. The pains were not severe; she was admitted to the infirmary at 3.30 p.m. She says that immediately after her admission she had three fairly strong pains, and that they then entirely ceased.

On admission the abdomen was rather tender, but the patient was not in pain; no uterine contractions could be felt; the

temperature was normal and the pulse 90. There were no signs of collapse, and she was quite cheerful. On vaginal examination the head was presenting, but had not entered the pelvis; the os was patulous, not much dilated, nor was the cervix drawn up.

The abdomen was prepared with iodine, and laparotomy was done at 7.30. On opening the peritoneum the uterus presented, the upper part being normal in appearance, but across the lower third there was a very large subperitoneal haematoma, which extended into both broad ligaments. It was difficult at first to make out the exact cause of this unusual complication, but on opening the uterus towards the fundus (where the wall was normal), as soon as the knife reached the edge of the haematoma it entered a large circular rent or gap in the middle line of the organ, about three inches in diameter, obviously a subperitoneal rupture of the uterus through the lower part of the scar left by the former operation. The living child and placenta were easily delivered.

The question of the best way of dealing with the condition then arose. Owing to the edges of the rent being very friable and much infiltrated with blood, it seemed to be impossible to close it in a satisfactory manner, and hysterectomy was considered. However, on account of the very large haematoma filling the pelvis, this was not thought feasible, and I decided to suture the incision in the uterus as best I could. This, of course, was easily done in the upper part, but when the rupture was reached great difficulty was experienced, and it was closed apparently not very effectively, owing to the infiltrated and lacerated edges. A large rubber tube was passed through the cervix and left there until morning to obviate any distension of the uterus with blood; an injection of pituitrin was given, and the patient, who had stood the operation well, removed to the ward.

After operation she never gave any cause for uneasiness, and made an uneventful convalescence.

An interesting point about the case is the freedom from signs of shock and collapse after such an injury to the uterus, with the subsequent effusion of so much blood. The pains also were never really very severe, nor was the os much dilated even at the time of operation. I was not at all satisfied that the closure of the uterine wound was effectual, and felt that if it had been possible hysterectomy would have been the better operation.

NOTE ON THE FATE OF HALAZONE IN THE ANIMAL BODY AND ON THE STABILITY OF TABLETS CONTAINING IT.

BY

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AND

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(Report to the Medical Research Committee.)

In a recent paper in this JOURNAL,¹ an account was given of the use of "halazone," *p*-sulphonichloraminobenzoic acid, for the sterilization of small quantities of infected water. As was previously stated, one of the great difficulties encountered in securing tablets of high germicidal potency for the sterilization of water has been occasioned by the lack of stability of the substances employed, when present in the small quantities required for tablets. Halazone appeared to offer distinct advantages in this respect over other substances hitherto made use of. Since our original communication we have had the opportunity of further testing the stability of our product and we have also determined its fate in the body when ingested.

The Fate of Halazone in the Animal Body.

Halazone even in large doses appears to be practically devoid of toxicity. We have fed rabbits for many weeks with doses of 100 to 200 mg. per day, without observable symptoms, and repeated doses of 500 mg. were also without effect. As the quantity needed for the sterilization of a quart of water is only 4 mg., the substance may be regarded as perfectly innocuous. The urine of rabbits which had received "halazone" given by stomach tube was collected and examined. As was to be expected, no unchanged substance was present and all active chlorine had disappeared. On acidifying the urine and extracting with ether, a crystalline acid was separated, which was purified by dissolving it in sodium carbonate and reprecipitating with hydrochloric acid. The substance decomposed at 280° C. and had all the properties of *p*-sulphonamidobenzoic acid. On analysis, the substance was found to contain 6.94 per cent. of nitrogen compared with a theoretical value of 6.96. The yield of pure acid recovered from the