depends on the relative production of a haemolysin or a neurotoxin. We would suggest a similar genesis in many instances of rheumatoid arthritis by means of a toxin with a special affinity for synovial membrane.

However, it must always be remembered that the whole metabolism is upset, and further work is required to investigate other possible factors responsible for the production of the clinical changes observed. Many observers have assigned importance to the isolation of various strains of streptococci from the stools, but the results are so far very variable and no reliable conclusions can be drawn. It is possible that the factor of achlorhydria may have some influence in determining this state of affairs, in view of the work of Billings⁷ and his collaborators on the variability of streptococcal strains in different media.

We wish to thank Dr. Munro, pathologist at the Royal Mineral Water Hospital, Bath, who was responsible for the blood counts and gastric analyses mentioned above.

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A LARGE RENAL CALCULUS.

BY

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LARGE stones of the kidney are not common; in this case the calculus weighed 1 lb. 3½ oz., and it is of interest that the symptoms were very mild and that operative treatment was successful.

The drawings by Mr. Thornton Shiells show well the shape of the calculus (Fig. 1) and the left kidney removed with it (Fig. 2). The main mass of the calculus lay in the dilated renal pelvis; the short branches occupied five of the much damaged calyces. The outlet from the renal pelvis is small, and below that the ureter is seen to be greatly dilated and its wall much thickened. The small calculus partially blocked the left ureter at its lower end close to the bladder.

FIG. 1.—Calculus.

FIG. 2.—Kidney with dilated pelvis.

Dr. H. E. Archer has kindly analysed the calculi and reports as follows:

Renal Calculus.—Weight 1 lb. 3½ oz. (555 grams). Samples taken at five points between the external surface and the centre show a composition, almost constant, of ammonium magnesium phosphate and a little calcium phosphate. The superficial layers also contain a little calcium carbonate. The branches consist of ammonium magnesium phosphate.

Ureteric Calculus.—Weight 2.8 grams. The composition is similar.

The patient was a man, aged 58, who was under my care at St. Peter's Hospital. From youth until he was 35 years old he was in the merchant service, then he retired and lived in Plaistow. For the last twenty-three years his urine has always been dark, sometimes as dark as port, and occasionally he had passed clots of blood. For the last five years his urine had smelt foul. For two years he had occasionally had pain in the left groin but never any renal or vesical pain. A fortnight before admission for the first time he suffered from frequency of micturition, with fever and rigors.

There was no family history of stone. His previous health had been excellent, except for malaria when 21 years old, and acute appendicitis requiring operation five years ago, and gout in one toe three years ago.

On examination the left kidney was easily palpable and obviously greatly enlarged and a little tender. It was freely mobile. His urine was very foul, alkaline, and contained albumin and pus with coliform bacilli and cocci. Cystoscopy showed marked cystitis and an enlargement of the prostate, which could also be felt per rectum. The orifice of the left ureter was inflamed; the efflux was unduly frequent and decidedly purulent. The right ureter was healthy and its efflux clear. X rays showed a large shadow in the left renal region.

The left kidney was explored through the usual incision in the loin, and the kidney containing its calculus was excised and also the greater part of the ureter and the small calculus in it.

Healing was slightly delayed by some suppuration in the scar. Two months later the enlarged prostate was enucleated suprapubically, and he has made an excellent recovery from both operations.

TREATMENT OF URTICARIA WITH COLLOSOL MANGANESE.

BY

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In a large skin clinic a considerable percentage of cases of urticaria, which are most intractable to treatment, are encountered. Although the pathology of urticaria is by no means definitely understood, I think we may reasonably assume that it is due to the action of an irritant on the vessels at the point where the cutaneous lesions make their appearance. This irritant, be it a toxin or protein, may reach the vessels from an external source or from the blood stream. As an illustration of the former I may cite the urticarial rash caused by nettles; the rash in this case is produced by an irritant from the plant reaching the blood and lymphatic vessels through the skin. As an example of the latter, the urticaria following the ingestion of certain shellfish may be taken; here the toxin or protein would appear to reach the blood stream through the intestinal canal.

It is the experience of every dermatologist that often cases are met with for which no cause can be assigned. It was owing to this experience that I was induced to try collosol manganese in the treatment of urticaria. Metals given in a colloid state increase oxidation and stimulate the protein colloidal particles in the serum, resulting in the dispersion of these particles so that the surface exposed to the invading particles becomes greater. The increased activity of the protein particles in the tissue and fluid has a destructive action on the invading protein or toxin.

It was with this theory in mind that I decided to try collosol manganese in some obscure cases of urticaria. The following four cases are given to illustrate the effect.

CASE I.

A woman, aged 27, unmarried, had suffered from daily attacks of "nettle rash" for twelve months. When I first saw her the face, arms, legs, chest, and neck were thickly covered with flat wheals varying in size from a coffee bean to a five-shilling piece. There was intense itching and burning. I gave her 0.5 c.cm. collosol manganese by intramuscular injections. On returning at the end of a week she reported that the rash had been much better and the burning and itching sensation decidedly diminished. I gave another 0.5 c.cm., and she again reported an improvement at the end of the second week. I gave her four more injections (1 c.cm., 1.5 c.cm., 1.5 c.cm., and 2 c.cm.) at weekly intervals, and at the end of six weeks of treatment she was quite free of her trouble. Six months afterwards she had a slight recurrence, and