attack of indigestion set in. Next day he had much pain and tenderness in the gastro-hepatic region, accompanied by slight jaundice and retching. Collapse set in, and he died on July 20th. There was evidently chronic disease of the liver, possibly malignant.

CASE CXXVIII.

Hospital patient, sent by Dr. Lloyd Williams, Stone, Staffordshire. Vesical calculus removed by litholapaxy two years previously. Catheter employed for three years. Residual urine 21 oz., foul, alkaline, containing much pus; specific gravity 1012. On September 28th, 1904, I removed the prostate, which weighed 3½ oz. The operation was easily accomplished and well borne, but the patient died uraemic on October 5th. The kidneys were found extensively diseased.

CASE CXXXVIII.

Gentleman, aged 72, brought by Dr. F. W. Wright, South Godstone. Was in great distress from over-distended bladder, with extreme frequency of micturition. Would not employ a catheter. Suffering from an enormous naso-pharyngeal growth, blocking both nostrils, which had recurred after repeated removal and general catarrh of the air passages. On October 31st, 1904, I removed the prostate, weighing 3½ oz., easily and rapidly. There was scarcely any bleeding or shock, and in the evening his condition was quite satisfactory. Early next morning, however, the breathing became rapid and laboured, and there was inability to cough up the accumulation of mucus in the bronchi. The bronchial symptoms increasing rapidly, the patient died that evening of heart failure. Though chloroform was employed, the bronchitis would seem to have been induced by the anaesthetic facilitating the accumulation of mucus in the bronchi in a patient the subject of chronic catarrh with naso-pharyngeal growth.

CASE CLI.

Gentleman, aged 70, seen with Dr. W. Y. Orr, of Putney. Prostatic symptoms had existed for six years, culminating in retention of urine November 28th, 1904; catheter passed with difficulty, and about a quart of urine with blood drawn off. On December 5th, Mr. Watson Cheyne being present, I removed the prostate, which weighed 4½ oz., with great ease in five minutes, with scarcely any bleeding. The patient was extremely restless and excited the whole day after the operation. Urine very freely secreted for two days, but was of pale colour and devoid of the usual odour. Then it became scanty, and the patient died uraemic on December 8th. There was no autopsy, but doubtless the kidneys were diseased from the backward pressure of the urine for years.

CASE CLXX.

Hospital patient, aged 69, sent by Dr. J. G. Blackman, Portsmouth. Catheter employed for fifteen years; entirely dependent thereon for two years. Frequent attacks of cystitis and bleeding. Urine contained much pus, but patient seemed in very fair health and a favourable subject for operation. On March 8th I enucleated the prostate easily and rapidly—in five minutes; there was practically no bleeding or shock. Beyond some retching after operation progress was satisfactory for forty-eight hours, but on the evening of March 10th severe vomiting set in, followed by collapse, and the patient died early next morning. No autopsy was allowed.

REFERENCES.

¹ July 20th, 1901; February 1st, July 26th, November 8th, 1902; July 4th, October 17th, 1903; May 21st, October 29th, 1904.

TREATMENT OF TUBERCULOSIS AND TUBERCULIN INOCULATION.

By T. WARREN BROWN, M.R.C.S.ENG., L.R.C.P.LOND.,
Wallington.

THE treatment of tuberculosis by tuberculin being somewhat new, and comparatively few cases having been reported, a description of a case which has been under my care for a year may not be without interest.

The patient is a young lady aged 16, who when first seen by me in February, 1904, was suffering from subacute cystitis. Previously she had passed a few drops of blood at the end of micturition with some pain, but little attention was paid to this fact until I saw her and learned from her mother that her urine was thick and there was pain after passing it, and sometimes blood, and that she was disturbed several times during the night owing to the frequent desire to micturate. On examination I found the urine contained pus and a trace of blood with some calcium oxalate crystals, and treated the case as one of ordinary cystitis; when, however, no sign of improvement occurred I sent a specimen of the urine for examination for tubercle bacilli and received the following report:

Specific gravity 1016, faintly acid, albumen small amount, blood a trace, sugar absent. The deposit is excessive owing to a moderate amount of pus. With this is a very little blood and an excess of vesical epithelium; some of the cells appear to come from the deeper layers of the vesical mucosa. No casts or renal cells. Some minute crystals of calcium oxalate. Tubercle bacilli are present in small numbers.

This satisfied me that the case was one of tuberculous

ulceration of the bladder, and desiring to ascertain its extent I, in consultation with Mr. Pardoe of St. Peter's Hospital, obtained a complete cystoscopic examination of the interior of the bladder. On the right side of the neck was a small ulcer, and around the orifice of the right ureter another patch. On pressing the right kidney turbid fluid passed out of the orifice of the right ureter; there were also several nodules scattered over the mucous membrane of the bladder, but clear urine was pressed out of the left ureter. This examination clearly showed right ascending tuberculous cystitis. The patient was put on general treatment with plenty of fats and urinary antiseptics, urotropine and salol aa gr. v, tr. bellad. $\text{m} \times \text{t.d.s.}$, also ol. santal flav. $\text{m} \times$ in capsules t.d.s. She remained on this treatment until June 14th, 1904, when she was getting worse, the pain requiring morphine suppositories every night. I again consulted Mr. Pardoe, and we agreed to start the tuberculin treatment, to which her parents readily consented. I started with Koch's T.R., which I obtained in measured doses from Messrs. Allen and Hanburys, beginning with the minute dose of $\frac{1}{100}$ mg., gradually increasing it every two days. At first no great reaction occurred beyond a slight temperature of 100° ; when $\frac{1}{2}$ mg. was reached the temperature went up to 102.2° , and pain became very severe; with $\frac{1}{2}$ mg. the temperature was 105.4° with rigors and malaise, but strange to say the pain became better. Owing to this strong reaction I returned to $\frac{1}{4}$ mg., which caused fair reaction and temperature 105° . I kept at this strength every other day for a week, the temperature returning to normal. I then again started on $\frac{1}{2}$ mg., which gave a reaction with temperature 103.8° F. After this I injected $\frac{1}{2}$ mg. every four days for about one month, and, as the patient responded in no way to this strength, the temperature keeping normal, I increased the dose to $\frac{3}{4}$ mg., this only giving a temperature of 100° F. The $\frac{3}{4}$ mg. was kept up for about one month, then 1 mg. was reached, which caused only slight reaction. The patient is still receiving injections of this strength once a week, and is very much better in all respects—pain very slight, micturition less frequent, and the urine almost clear, with no tubercle bacilli. The weight of the patient was increased about 2 lb. a month during the treatment. After three months of tuberculin treatment the bladder was again cystoscoped by Mr. Pardoe, who found the ulcers healed and in their place puckered scars, but there were still present the scattered nodules. It is to be hoped that these are undergoing retrograde changes, and that the disease has been cured. The patient is now living at Westcliffe-on-Sea, where she is under the care of Dr. Day, who still continues the inoculations from an immunizing as well as curative point of view. This patient's disease is localized to the bladder, and all the other organs of the body are normal; I therefore consider it was a most suitable case for the tuberculin treatment, and I do not hesitate to say that the latter has been the means of curing a disease which has always been looked upon as of progressively downward character.

TREATMENT OF SEA-SICKNESS.

By J. METCALFE SHARPE,
Surgeon, R.M.S. *Ullonia*.

As the treatment of this troublesome malady is, up to the present, somewhat indefinite, I desire to advance a theory which I hold is not altogether impracticable, and which, as ship surgeon in both the Cunard Steamship Company and P. and O. S. N. Company, I have found helpful to more than one sufferer.

Assuming that sea-sickness is a reflex action of the stomach to a central stimulus, it occurred to me that the stimulus must enter the brain by one or more of the special sense tracts. I found that the vomited material in five cases of uncomplicated sea-sickness compared in reaction with the vomit in certain organic diseases of the nervous system, namely, locomotor ataxy, etc., being very acid, the acidity being due to lactic acid, and, to a lesser degree, free hydrochloric acid. The examination was conducted in each case fifteen minutes after the administration of food. The test used was the following:

Add to a 5 per cent. solution of carbolic acid two or three drops of a solution of perchloride of iron, until fluid is a pale amethyst blue. To this add a few drops of contents of stomach, when, if lactic acid is present, the colour will change to a canary yellow.

Again, the vomiting of sea-sickness is "persistent," and occurs after everything taken into the stomach; that is to say, the simplest and least irritating articles of food are as