grafts, bone and periosteal transplantations, grafts of whole joints, &c.), I thought of doing the same with the ureter—in other words, of performing ureteral auto-transplantations. The number of these experiments as yet made is too small to allow me to give a definite answer on the practical use of ureteral auto-transplantations, still I think I may call the results satisfactory. I hope to be able later to prove them on a larger scale and to confirm them with the histological examination.

Rome.

A CASE OF TRICUSPID REGURGITATION.

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THOUGH tricuspid regurgitation of organic origin is not particularly uncommon, yet it is so frequently accompanied by a lesion of the mitral or aortic valves or both that a case in which the endocarditis has affected the tricuspid valves only seems sufficiently rare to be worth recording.

A boy, aged 5 years, was admitted into the Hospital for Diseases of the Heart on May 22nd, 1911. There was nothing of importance in the family history. In infancy he had suffered from convulsions, but none after the first year. When 2 years old he had measles, and at 3 he suffered from diphtheria, the attack having been severe; the heart was said to be affected while in the fever hospital, and since then he had always seemed rather weak. Three months prior to admission he had seemed very tired and languid, at times being giddy, and in March he was in the Paddington Children's Hospital for "endocarditis," but remained rather a short time owing to the development of whooping-cough. On admission he seemed dull and apathetic, with a somewhat dusky appearance. The heart's apex beat was in the fifth space in the nipple line. Percussion showed distinct enlargement—dulness extending half an inch external to the nipple line and one-third of an inch to the right of the right border of the sternum; speaking generally, it was rather a flat area of dulness. A long, blowing, systolic murmur was heard all over the præcordial area and at the back, the pulmonary second sound was distinctly accentuated, and there was a cantering rhythm in the tricuspid area. I should mention that when seen in the out-patient department there was a systolic thrill internal to the apex, but this was not detected again while he was in the hospital. The liver was enlarged to within 2 inches of the umbilicus, but there was no tenderness, pain, or pulsation. The lungs presented nothing abnormal.

Soon after admission he complained a good deal of pain in the legs, and a moderate degree of œdema developed there. On June 8th there were dulness and deficient entry of air at the right base up to the angle of the scapula and in the right axilla; there was also considerable œdema in the lumbar region and most of all about the scrotum; in fact, general anasarca but no ascites. He was given diuretin gr. v., t.d.s., with very good results; the urine excreted during the few preceding days had averaged about 11 oz.; after taking diuretin a couple of days the excretion of urine increased considerably, while the œdema very largely disappeared, there being only some fluid at the bases of both lungs. On June 14th the temperature rose to 99.6° F., and on the 15th to 101.8°, returning to normal on the 20th. During this time there was an increase of the cardiac dulness upwards to the upper border of the third rib, and there was a triple sound suggestive of pericarditis in the third and fourth left spaces close to the sternum. On the 27th the œdema had again increased very much, particularly about the face, giving the patient a most typically renal aspect. However, though the urine was examined frequently, there was never more than a trace of albumin to be detected and no casts, so that it was quite clear that the case was purely cardiac. He was then given a mixture of tinct. digitalis, m v. ; spt. ætheris nitr., m xv. ; inf. scoparii ad $\frac{1}{2}$ ℥ , every four hours, without producing much effect upon the œdema, which, however, was never so great as when it had first appeared. At this time a great trouble was sleeplessness and frequent shouting out at night, which disturbed the whole ward; he was never actually delirious; the shouting was loud and vigorous, but he always had something more or less intelligible to say when the nurse came to him. At first

the condition was relieved by chloralamide (gr. x.) with ammonium bromide (gr. v.), but it soon ceased to be effectual, even after increasing the dose. After that occasional doses of nepenthe (m v.) were given at night, which calmed him to some extent, but the restlessness and shouting at night remained very marked features of the case. On July 3rd the triple sound at the base of the heart was no longer audible, but the cantering sound in the tricuspid area was still very evident. Just at this time the weather became excessively hot and the child seemed obviously worse, though there was no change in the physical signs, the cardiac action being regular and fairly forcible to within 24 hours of the end, which came on July 8th.

The necropsy, which was performed by my colleague Dr. Russell Wells, showed the following: Chest: 3 c z. of fluid in each pleural cavity. Lungs quite healthy. Heart: weight, 6 $\frac{1}{4}$ oz.; a few drachms of fluid in the pericardial sac; slight recent pericarditis at the base. Right auricle: hypertrophied and dilated; markedly muscular. The wall had numerous muscular bands, giving it the appearance of a normal ventricle. Left auricle: practically normal except for a fatty deposit diffused over the whole surface under the lining membrane. Aortic, pulmonary, and mitral valves competent and normal. The tricuspid valve showed recent translucent vegetations on all the flaps of the valve, having the appearance of glue tinted with saffron. Kidneys: right 2 $\frac{1}{4}$ oz.; left 2 $\frac{1}{2}$ oz.; healthy; marked foetal lobulation. Liver: weight 21 $\frac{1}{2}$ oz.; well-marked nutmeg appearance. On the pancreas and adjacent tissues there were some little specks of about the size of a pin's head, of a dead yellowish-white appearance, probably fatty necrosis.

Finding the mitral valve normal did certainly come to me as a surprise; the fact that the systolic murmur was plainly heard at the back is generally held to be against the purely tricuspid origin of it; then, again, the accentuated pulmonary second sound seemed to point to the mitral lesion, but in children no doubt one cannot attach much importance to these signs. On the other hand, there was no cough or dyspnoea, and the comparative absence of œdema from the lungs was in striking contrast to the general anasarca. The cantering sound in the tricuspid area which usually points to an abnormal blood pressure in the right ventricle ought, perhaps, to have given the clue to a correct diagnosis.

Green-street, W.

BACTERIAL INFECTION OF THE STOMACH WALL TREATED BY VACCINE-THERAPY.

BY FRANK KENNEDY CAHILL, F.R.C.S. IREL., D.P.H.

THE following case may be of interest to some of the readers of THE LANCET.

The patient, a man, aged 48 years, who consulted me in April, 1910, had been suffering for some 12 months from "foul breath." So great was the social inconvenience that it became almost impossible for him to carry on his business, involving, as it did, intercourse daily with a somewhat fastidious *clientèle*. In his efforts to seek relief he had consulted many physicians and specialists, among the latter a very eminent throat specialist, who declared that he was quite free from nasal trouble, and a dentist who declared that his denture was flawless. I made a very careful general examination and could discover no physical disability save a cystitis of long standing (45 years). This latter the patient informed me dated back to his childhood, when he had been operated on for stone in the bladder at the age of 3 years. A stricture followed the operation, and as long as the patient could remember his urinary stream had been small. There were no symptoms of stone at the time of examination. On passing a No. 4 catheter about two ounces of "residual" urine came away; this was found to contain numerous pus cells, and on bacteriological examination yielded a growth of pure streptococcus.

The patient did not complain of "indigestion" (that much abused term). He had a hearty appetite, but eating or starving he had his "foul breath." The stomach emptied itself in normal time. Gastric chemistry was normal. Having secured specimens from his stomach, the cultivation yielded streptococcus and bacillus coli. There was a possibility that the streptococcus found in the stomach came from

the nose or was due to pyorrhœa alveolaris, but the opinions of the above-mentioned specialists would seem to negative this. So the patient would seem to be suffering from a bacterial infection of the stomach, and it is interesting to note that the streptococcus was found in the bladder also.

I had a "vaccine" prepared consisting of a streptococcus from the urine and a bacillus coli from the stomach in the following proportions representing millions:—

	No. 1.	No. 2.	No. 3.	No. 4.
Streptococcus	5	5	10	20
Bacillus coli... ..	5	10	15	20

I made the first injection on April 19th, and repeated the injection at intervals of one week, giving in all four doses. By the middle of May the "foul breath" had completely disappeared, and has not returned up to the present, now 17 months afterwards.

The case presents many features of extreme interest to the stomach specialist, but in the course of a short communication I shall refer to one only. Hitherto infection of the stomach walls by the bacillus coli has been noted by gastro-arterologists in obstruction of the pylorus due to malignant disease only, and I have been unable to find in the literature any record of a case in which, though the gastric motility was normal, a bacterial infection of the stomach mucosa by this organism had occurred.

The cystitis in this patient improved, but did not, of course, disappear, and the patient was quite content with the cure of his "foul breath" which, had it continued, would have necessitated his retirement from business. (He has now had the urethral stricture dilated and all pus has disappeared from his urine.)

Dublin.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

SURGICAL SECTION.

Caries of Frontal Bone.

A MEETING of this section was held on Nov. 14th, with Mr. CLINTON T. DENT in the chair.

Dr. W. RINGROSE GORE read a paper entitled, "A Case of Caries of Frontal Bone and Intracranial Abscess due to Bacillus Typhosus 11 Years after Attack of Typhoid." The important point arose as to what could be done to prevent these cases of typhoid bone infection. Although not usually fatal in themselves, they might become so from their situation; for instance, an abscess might rupture through the dura mater, and a case of fatal peritonitis had been recorded following a typhoid abscess of the lower end of the sternum. It might be held that patients suffering from this condition were typhoid carriers, the habitat of the bacilli being in the walls of the gall-bladder where they could not be reached by medication or vaccines as they were shut off from the circulation, but from which situation they could occasionally infect the blood-stream. Removal of the gall-bladder had been performed, but the operation in these cases appeared to be a dangerous one. The other alternative appeared to be to try by successive courses of vaccine to create a blood immunity.

Mr. H. BETHAM ROBINSON read a paper on a case of Extra-peritoneal Rupture of the Bladder without Fracture of the Pelvis, and the meeting concluded with a paper by Mr. L. A. DUNN on a case of Retrograde Enteric Intussusception.

CLINICAL SECTION.

Exhibition of Cases.

A REPORT of Major Leonard Rogers's paper on the treatment of cholera among Europeans at Palermo, read at a meeting of this section on Nov. 10th, and the discussion thereon, were published in THE LANCET of Nov. 18th. At the same meeting many cases were exhibited, details of which are given below.

Dr. HERBERT P. HAWKINS showed a case of Enlarged Spleen with Recurring Hæmatemesis. The patient was a girl aged 9. She was said to have been pale and delicate

from her birth. At the age of 4 she suddenly vomited half a pint of blood without pain and without any previous symptoms pointing to gastric disease. She was admitted into the Belgrave Hospital for Children and apparently soon recovered. At the age of 6 she had a second hæmatemesis, equally sudden, and she was said to have vomited a pint of blood. This was followed by melæna for several days. It was not certain, but it was probable, that this attack was accompanied by some pain in the epigastrium. She recovered in about six weeks. Early in 1910, at the age of 8, she began to have frequent attacks of pain "in the stomach and around the heart." Crops of small purpuric spots appeared on the chest, and the mother stated that she was easily bruised. On one occasion there was epistaxis. She was becoming pale and weak, and on admission into St. Thomas's Hospital in April of that year melæna was observed on several days in succession. The spleen projected $2\frac{1}{2}$ inches below the costal margin and it was indurated. Red cells were 2,425,000, with a colour index of 0.7; leucocytes were 3700. Three normoblasts and five megaloblasts were seen. Polychromatophilia was marked. The coagulation time was 2.5 seconds. There was no other sign of disease beyond hæmic murmurs. After a month of treatment with arsenic the red cells were 3,437,000, with a colour index of 0.6. She remained fairly well, though always pale, till July 27th, 1911, when she suddenly vomited a pint of blood. For six weeks before this she had complained from time to time of abdominal pain just above the umbilicus. A few hours later there was further hæmatemesis, and melæna followed for several days. The spleen was enlarged and hard as before. Red cells were 2,200,000, colour index 0.5, leucocytes 2980, with no change in relative proportions; two normoblasts, but no megaloblasts seen. For 14 days there was pyrexia, maxima being 101° to 102° F. Under the use of arsenic the condition of the blood had slowly improved. The red cell count was now 4,328,000, colour index 0.8, leucocytes 3600. She was fairly well; she took food freely without any discomfort, but she was not gaining weight. The liver was just palpable, but it was within the limits of health. The pulse was seldom under 100, and the urine occasionally contained a trace of albumin. The spleen moved freely with respiration, and the question was whether the condition of the blood and the history of the illness justified its excision.

Dr. W. ESSEX WYNTER and Mr. JOHN MURRAY showed a case of Toxic Cirrhosis, with Spleno-portal Thrombosis and Ascites (Banti's Disease), treated by femoral drainage. The patient was a female aged 44. Eight years back, during pregnancy, while moving some furniture, she felt something give way in the left hypochondrium. Subsequent to delivery a lump was felt in this situation, and three months afterwards there was enlargement of the abdomen; three years ago, in similar circumstances, the abdomen was again distended. For three months before admission this distension had been increasing so as to cause difficulty in walking and breathing, with pain when lying on the left side, and oedema of legs. Diarrhœa had been constant. There was well-marked ascites, and the spleen descended to the level of the umbilicus. The diaphragm was pushed up, displacing the heart and causing some collapse of the bases of the lungs. The liver was small. On March 10th, 1911, 21 pints of serum were removed by paracentesis. It had a specific gravity of 1018 and contained 40 gr. per litre of coagulable protein and traces of mucin, but no reducing substance or cells. On March 24th, 28 pints were removed by paracentesis. On the 28th Mr. Murray opened the femoral ring through a semilunar incision in Scarpa's triangle. A small opening was made above Poupart's ligament to enable the peritoneum to be pushed through. This was then divided and stitched to the sides of the ring. A considerable amount of fluid escaped, but the abdomen was not completely emptied. The incisions were closely sutured, and healed in a few days. On account of the rapid formation of fluid causing tension in the femoral wound, paracentesis was twice performed in the surgical ward—May 5th, 23 pints, 16 oz.; May 23rd, 10 pints, 12 oz. She was discharged on May 26th. During September, owing to distension of the upper femoral region by gravitation of fluid, the scar again gave way, leaking slightly; owing to apprehension of possible peritoneal sepsis the patient was readmitted and fitted with an elastic support. While lying up the ascites returned and 16 pints were removed on