growth in any of the viscera except the mesenteric, iliac, and lumbar glands.

Remarks by Mr. DUNN.—The colon was opened on account of the pain and trouble which attended the act of defecation. I chose the transverse colon, as it seemed probable that it could be more easily delivered from the abdominal cavity than the sigmoid flexure in this case. The interior of the abdomen, too, can be more easily examined by the exploring hand and the situation is sufficiently far removed from the growth as to ensure that no direct extension from the original focus will involve the artificial anus. It is a convenient position for a temporary artificial anus when it is wished subsequently to remove the growth. The patients find little or no inconvenience from it and being situated mesially the colotomy plug can be kept in position more readily than if placed laterally, as in inguinal colotomy. In one case, subsequently to an operation of this kind, the woman became pregnant and was in due course delivered of a full-term, healthy child, the regular action of the artificial anus being in nowise interfered with. In the present case it was not until I had explored the abdomen from the median incision that the masses in the mesentery were discovered, which quite put aside all thoughts of extirpating the growth. When the suppression of urine appeared the whole of the facts were laid before the patient and her friends and they were allowed to decide as to the question of operating, since we did not feel justified in urging upon them a further operation—that of draining the pelves of the kidneys through the loins—which, although it might have prolonged life for a short period, would have rendered that existence utterly miserable.

Remarks by Mr. MEACHEN.—The question of suppression of urine, especially of the obstructive variety, is always of interest both to the pathologist in its effects upon the urinary organs and to the clinician in observing the manifold complex and varied symptoms comprehended under the term "uræmia." This case presents several instructive features in that it illustrates how lengthened a period may elapse from the commencement of an obstructive suppression both up to the time when uræmic symptoms are first developed and also before the fatal issue ensues. The case which would seem to be the record is quoted by Rayer¹ of a man, aged 64 years, in whom death took place on the twenty-fifth day from anuria. At the necropsy the right kidney was found to be atrophied and the left hypertrophied and there was a calculus impacted in the left ureter. It is noteworthy that in these cases the anuria is seldom really absolute and in this man the urine was voided on three occasions, each time being "clear, colourless, and almost devoid of saline ingredients." It is to be regretted that none could be collected for examination in the present case. Russell² has recorded a case of death on the twentieth day and post mortem calculi were found in both renal pelves. From the point of view of treatment it is obvious that if the seat of obstruction be known nothing short of operative interference will offer the slightest chance, but the question as to whether such operation would be justifiable for the sake of procuring temporary benefit only is one for very serious consideration.

ROYAL CORNWALL INFIRMARY, TRURO.

A CASE OF STRANGULATED COMPLETE PROLAPSE OF THE RECTUM RELEASED BY ABDOMINAL SECTION; ULTIMATE CURE OF THE CHRONIC PROLAPSE BY ANCHORING THE SIGMOID TO THE ABDOMINAL WALL (COLOPEXY).

(Under the care of Dr. F. HAROLD CARLYON.)

It is not improbable that in the following case there was some abnormality in the length and arrangement of the meso-rectum which predisposed to prolapse, and as it had lasted for 20 months it is strange that the prolapse had never become chronic but had always been readily returnable. The chief interest in the case is, however, connected with the operation, which was performed for the permanent cure of the condition. Abdominal section in this case not only offered a means of reducing the prolapse, but afforded an opportunity for permanently preventing its recurrence. The favourable result of the laparotomy is noteworthy in so young a child, especially when

it is remembered that the operation was somewhat prolonged. As Dr. Carlyon points out in his remarks, the operation has only been performed in a few cases. The first "colopexy" was apparently done by Berg who operated in all in three cases. It can only be advisable in those rare acute cases in which it is found impossible to return the prolapsed bowel by pressure from below.

On Oct. 4th, 1899, an emaciated female child, aged twenty months, was sent into the Royal Cornwall Infirmary by a medical man with the following history. Since birth the child had never had an action of the bowel without the help of an enema, prolapse of some portion of the bowel always following the very constipated stool; the mother had experienced no difficulty in returning it. On the above date a much larger amount of gut descended, and finding that she could not deal with it she sent for her family medical adviser who, finding all attempts at reduction futile, sent the child into the infirmary.

Dr. Carlyon saw the patient some four hours after the prolapse had taken place; she was suffering greatly from what appeared to be shock, possibly from the pain of repeated attempts at reduction; the child was cold, her face was blanched, the lips were livid, and the tongue was protruded. No pulse could be felt at the wrist and she showed little sign of consciousness. From time to time violent contractions of the gut within the abdomen took place plainly observable through the thin abdominal wall. The prolapsed gut was intensely congested and showed as a dark red irregular oval tumour measuring seven inches in length, and was not in the least affected by the straining. Dr. Carlyon soon convinced himself that further taxis was not only futile but dangerous, excision of so great a mass was out of the question, and seeing that the little patient was sinking rapidly he decided to open the abdomen at once. This was done with the usual precautions, an incision being made as for left inguinal colotomy. The large intestine was easily found, though the small gut gave an infinite amount of trouble due to the constant straining which the small amount of chloroform that the administrator dared to administer did little to diminish. Following the colon through the pelvis to the anal outlet the fingers came to the hard mass of protruded bowel firmly fixed. After some 15 minutes of gentle traction, combined with careful manipulation and compression from without, the whole of the gut was safely returned to the abdominal cavity. The colon was passed upwards until the sigmoid came into view, which was anchored in the following manner. Three sutures of silkworm gut were passed through the entire thickness of the abdominal wall on the one side of the incision, thence through the serous and muscular coats of the gut for an inch of its circumference, and finally through the abdominal wall on the other side; these were pulled up and tied so that a portion of the wall of the gut was pinched between the muscular walls in the incision in the hope that they would become thoroughly adherent to it; finally, the skin edges were carefully brought together, entirely concealing the gut. The wound was dressed in the ordinary way and a pad applied to the anus by a T bandage. A small enema of brandy and beef-tea was given and the child was put into a well-warmed bed. Improvement was almost immediate, consciousness returning together with a fair pulse and good colour. During the first night the child was given small quantities of milk by the hand and in the morning she clamoured for, and was given, her usual bottle of milk with a little water added; this was continued regularly at intervals of two and a half hours. Eighteen hours after the operation, and for the first time in her life, the child had a natural unassisted action of the bowel, with apparently no pain and no attempt at prolapse, and the straining diminished in violence.

All went well until the fifth day when the charge nurse on going to attend to the child found her again in a condition of collapse. Dr. Addie White, the house surgeon, was summoned and on undoing the dressings he found that most of the small and some part of the large intestine had escaped from the abdominal cavity, the stitches having torn through the thin wall on the right side of the wound; to the left side the sigmoid had become firmly attached. Dr. White, after thoroughly cleansing the bowel, returned it to the abdomen, and having freshened the edges of the wound once more brought them together with silkworm gut, further supporting the wound with long strips of plaster. No ill-effects followed the accident, the child making an uninterrupted recovery.

¹ Mal des Reins, tome iii., p. 490.

² Medical Times and Gazette, 1879, vol. i., p. 474.

She had a natural action of the bowel daily and no return of the prolapse. She was sent home on Oct. 29th with the wound firmly healed and considerably fatter than when she came into hospital.

Remarks by Dr. CARLYON.—On the operation of colopexy there is very little literature. I can only find mention of three cases, two in the "Medical Annual" for 1898, p. 474, as having been performed by Dr. Charles Kelsey in severe old-standing cases of procidentia, and the third in the "Annals of Surgery," 1893, p. 373. I cannot find that the operation has ever been performed for the relief of an acute case of irreducible prolapse of the rectum. Further, I am convinced that nothing short of this severe measure would have saved the child's life. In conclusion, I gratefully acknowledge my indebtedness to Dr. White for his careful after-treatment of the case.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Open-air Treatment of Tuberculosis.

A MEETING of this society was held on Dec. 12th, Mr. THOMAS BRYANT, the President, being in the chair.

Dr. SIDNEY MARTIN, in continuing the discussion on the Open-air Treatment of Tuberculosis, remarked that it was an infective disease the arrest of which depended on three factors—the amount of the virus, the virulence of the bacillus, and the resistive power of the infected individual. This might be said of all infective diseases, but there were some important differences between tuberculosis and the more acute infections. In these, for example, the infective agent remained but a short time in the body, its death or the prevention of its continued growth being due in some instances to the formation of substances in the body inimical to it—substances which conferred immunity and which increased the resistive power of the organism. The slow growth of tuberculous lesions, the prolonged vitality of the tubercle bacillus in animal tissues, and the very problematical formation of anti-toxic substances in the patient infected by tuberculosis were in a strong contrast to some of the acute infective diseases. Mankind must be considered relatively immune to the disease. The bacillus certainly tended to become quiescent. Another question of prime importance was the question of secondary infection. The two most important of these were the streptococcus and influenza and in children the acute infectious diseases. Some observers ascribed the high temperatures of phthisis to these secondary infections, but this view was not generally held in England. To prevent these secondary infections was one of the objects of the treatment by cleanliness of the surroundings and purity of the respired air. He would not minimise the value of drugs, though so-called "specific" treatments were futile. The "open-air" treatment had as its object the increasing of the resistance of the patient and the heightening of the immunity by increased vitality. The increase and dissemination of their knowledge of tuberculosis had done good in several ways. It had led to measures being taken for the destruction of the sputum and for the careful disposal of linen and clothes soiled by the expectoration. It had also led to the prevention of infection of the alimentary tract, as, for example, by the boiling of the milk which might be dangerous. And if the prominence occupied by the tuberculosis question had no other effects than these, good results would have been achieved. But two other facts were becoming more generally recognised—viz., that the tuberculous patient when febrile must be kept at rest like any other patient with fever and that the tuberculous patient must during treatment be kept under supervision and not be sent on long voyages or to strange countries in the haphazard way formerly practised. A pure air and life in the open air were essential in the treatment of the disease, with the objects of increasing the resistance of the patient and of preventing secondary infections. An excess of food was of advantage in many cases in order to repair the wasted tissues; but a mere increase of the fat of the body did not increase the immunity, and he considered that the excessive feeding now

practised in some places was not only physiologically but practically wrong. To make a patient eat till vomiting occurred was of no advantage whatever in treatment; to continue excessive feeding while there was functional derangement of digestion was also of disadvantage. Judicious feeding, but not necessarily over-feeding, was the line to work upon. A third element in the treatment was a change of life with a change of locality. This not infrequently acted as the turning-point towards recovery in a case of tuberculosis. Whether this treatment could be carried out among the poor was a question, but he (Dr. Martin) did not agree with the treatment of the better class of patients in sanatoria. All the elements necessary could be fulfilled at home.

Dr. J. E. POLLOCK thought it might be profitable to compare the present with times past. In 1838 the mortality from phthisis was 38 per 1000 of persons living. In 1892 it was 14 per 1000. What were the causes of this decline? The health of the whole population had improved. Some diseases had been extinguished. This change had been brought about, not by any special medical treatment, but by the general causes of better sanitation, such as subsoil drainage, increased comfort, better dwellings, dress, and food of the whole population. But the question was, What had they, as a profession, done in the way of treatment? He believed that the results achieved at the Brompton Hospital for Consumption would compare favourably with those of the various sanatoria in this and other countries. At that hospital they divided the cases into stages of the disease—first stage with signs only of consolidation, second stage with softening, and third stage with cavitation—so that it was a little difficult to compare these with the figures given at various sanatoria. But he quoted statistics from Sir Herman Weber, Dettweiler, and Brehmer which would show, he believed, that the results achieved were very similar. The principles adopted at the Brompton Hospital had for years been similar to those now advocated and employed at the various sanatoria. They had a large, airy, well-ventilated building, the ventilation being carried on by means of extraction, and pure air was admitted heated by passing over pipes. The temperature was kept at from 60° to 63° F. day and night, summer and winter. The patients were encouraged to go out into the grounds. The diet was liberal, but the patients were not crammed. The great majority had a moderate amount of stimulants of some kind. No attempt was made at specific treatment—only general treatment, which aimed at improving the general health. As regards remedial treatment there was no known specific—nothing which went direct to the bacillus and destroyed it. The only means they had were directed to increase the vitality and the resistance of the individual. The treatment by open air was certainly not a new one. In 1865 he had published the following statement: "By experiment it will be found that the greatest amount of relief to a patient suffering from tubercle in the lung is obtainable by free exposure, with the surface well protected, to a dry, pure, still open air, even when of a low temperature." He thought there were objections to sanatoria, and one of these was a danger of hypermedication. They got very good results without sending the patient to any institution.

Dr. F. G. D. DREWITT said there were two points he wished to refer to. They had not recognised the difference between living in the open air and living in a draught. Fresh air could be got without taking out the windows. The question of adequate ventilation without draught was one of the most important connected with that subject. His other point related to food. What should it consist of for enforced feeding? If a person put on too much weight it was probably fat and this by no means indicated that his resisting power was greater. He referred to the fact, revealed by Mr. Bland Sutton's researches at the Zoological Gardens, that graminivorous birds died in large numbers from tuberculosis, but the meat-eating and fish-eating birds died much less frequently from that disease. Woods-Hutchinson's researches revealed the same thing. Carnivora and birds of prey hardly ever died from tubercle. Caged animals of all kinds died from tubercle and so did human beings confined to narrow dwellings. These and other facts led him to the conclusion that consumptives ought not to have an excess of starches and sugars but a liberal supply of meat.

Dr. J. W. WASHBOURN said that no one who had listened to this discussion could doubt the value of the so-called open-air treatment of phthisis. He agreed with the majority of the speakers in considering fresh air to be only one of several factors concerned in producing the beneficial results which