

CONGENITAL OCCLUSION OF THE SMALL INTESTINE.

THE following case resembles in some respects that described by Dr. B. Shea in the *BRITISH MEDICAL JOURNAL* of September 24th (p. 549).

A male child, the seventh in the family, was born in December, 1926. He was well nourished and weighed 8 lb. He passed no meconium, but some greenish mucus, and the anus admitted the little finger. At first he took the breast well, but on the third day he began to vomit about half an hour after feeds, first bile-stained fluid and later faecal material. This continued, with increasing distension of the abdomen, till he died on the sixth day.

At the necropsy it was found that the distended upper coils of the small intestine ended in a bulbous part. There was about an inch of mesentery, with a tiny cord attached to its free border, then another much smaller bulb continuous with the lower six inches of ileum. The caecum and other parts of the large intestine were present, and rotated perfectly, but they were very small in size. There was an intussusception of the ileum, probably agonal, as it was not inflamed, about an inch below the occlusion, and an inch and a half in length.

The mother had been treated for syphilis during previous pregnancies, but her Wassermann reaction was negative. Several small lymph glands in the mesentery, near the occlusion, were examined for spirochaetes by Dobell's method, but none were found.

Tunbridge Wells.

SIDNEY E. CROSKERY, M.B., Ch.B.

Reports of Societies.

THE FUTURE OF RADIOLOGY.

At the first sessional meeting of the Section of Electrotherapeutics of the Royal Society of Medicine, on October 21st, Sir HENRY GAUVAIN delivered his presidential address, and three short communications were made by distinguished visitors from the United States, Denmark, and Switzerland respectively, who had been elected corresponding members of the Section.

Sir Henry Gauvain said that he took his election to be an indication that the Section regarded the science of electrotherapy as embracing the whole range of electromagnetic vibrations in their application to the relief of human suffering. It was no exaggeration to claim that no branch of medicine could record such rapid advance of recent years. A century ago few could have conceived that by submitting the subject to forces impalpable, invisible, and intangible the inner secrets of the human structure could be clearly revealed, malignant growths dispersed, and rickety bones restored to normal. Though it was not yet to be explained how these and other effects were produced, they were so readily and certainly achieved that they had ceased to be surprising. Whither would these forces lead? It was right to give rein to the imagination if, as in this event, the imagination sprang from a foundation of facts already familiar. It would be alluring to discuss the possible future developments of electrotherapeutics, but there were present in the Section three distinguished visitors from other countries who would indicate some recent advances for which they were responsible. He would make only one personal observation. It appeared to him that the advance which electrotherapeutics was making in all its applications was so rapid and important, so pregnant with possibilities, that not only was the employment of highly expert practitioners called for in this branch of scientific medicine, but it was imperative that all medical practitioners should have a certain clear knowledge of the principles and practice of electrotherapeutics. The time had come when all medical students should have systematic instruction in these methods. The status of the radiologist on the staffs of teaching hospitals should be improved. The advent of a diploma in radiology was to be welcomed, but it was not enough. It might encourage more specialization in this branch of medicine, and that was a good thing, but what was more needed was a larger general knowledge amongst medical men of the significance and importance of the subject. The electrotherapist should have equal rank with the physician and surgeon. Not only should he have his department, which should not be considered a subordinate depart-

ment to any other, but he should have his own wards, beds, and teaching facilities. The interests of patients demanded that the proper recognition of this branch of medicine should not be further delayed.

Radiological Methods in Diagnosis of Pulmonary Tuberculosis.

Dr. H. K. DUNHAM (professor of electrotherapeutics, University of Cincinnati), who addressed himself to the subject of radiological methods in the diagnosis of pulmonary tuberculosis, said that the radiologist, if he hoped to help the clinician in medicine, must translate for him x -ray densities into pathology. To do this it was necessary to use the stereoscopic method, by which alone it was possible to make useful study of the shadows with their pathological significance. In the single plate some of the subtler variations of density as between different areas were apt to be lost. Dr. Dunham exhibited a large number of radiograms of chest conditions, and pointed out the markings which showed the stage and condition of the tuberculosis. A number of the examples were included to illustrate what he called the fan indicating tuberculosis producing exudate. It was, he thought, too common in the United States for radiologists, while anxious to ensure that their radiological methods were sufficiently perfected to detect the earliest signs of tuberculosis, to fail to realize, what he thought was the greatest value of x rays in this connexion, that the x -ray method enabled the physician to exercise care and control over the whole progress of the case. He also begged radiologists not to try to do too much; they should concentrate on giving the clinician some definite information relating perhaps only to a small fact, rather than make a guess at something on which their methods did not enable them definitely to pronounce. Locked up in the x -ray plate was pathology. The x -ray pictures must be translated back into pathology, and the clinician must translate back into pathology his physical signs. Without this, the work on the chest would be lost to a large extent.

Treatment of Pulmonary Tuberculosis by Modern Methods.

Dr. J. GRAVESEN (medical superintendent, Vejlefjord Sanatorium, Denmark) also showed a number of lantern slides illustrating some recent results in the treatment of tuberculosis. He dealt with the effect of artificial pneumothorax and sanocrysin; both had reduced the number of failures in tuberculosis treatment, and had greatly shortened the period. The reason why such different opinions were expressed with regard to the chemotherapy of tuberculosis was that the good effect of the agent was not to be expected in all tuberculosis cases, but only in those where there was exudation or fresh spread. The sanocrysin specific treatment covered those cases in which the affection was of an exudative character. Artificial pneumothorax covered just those cases in which sanocrysin failed; it was useful where there was fibrosis of the lungs of a chronic type, which did not react well to the ordinary sanocrysin regime. From the x -ray picture the best indications could be obtained for choice of treatment in tuberculosis. A number of the lecturer's lantern slides illustrated the good effects of both these treatments in selected cases. In some instances both treatments had been applied to the same case—collapse therapy to the one lung, and sanocrysin to the other. He also urged close co-operation between the radiologist and those engaged in the treatment of tuberculosis, so that a qualitative diagnosis might be reached with the greatest sureness.

X Rays in the Treatment of Breast Cancer.

The last of the three visitors to speak was Professor HANS ISELIN (Basle University), who referred to the use of x rays after operation for cancer of the breast; he had used the method in the Basle University Clinic since 1906. He first treated cases of inoperable carcinoma, then operable recurrences and metastases, and finally carried out after-treatment on operated cases. The radiation was applied as soon as possible after operation, one Sabouraud dose being given through from 1 to 3 mm. of aluminium. Of twelve patients irradiated as far back as 1918, seven were

still alive in 1927 and enjoying good health; two had died of cancer, and three had succumbed to other maladies. The heaviest mortality in breast cases arose among patients with pure scirrhus, and he was inclined to endorse the prognosis of the late Dr. Hedinger, based on histological considerations, that scirrhus was the most dangerous, and medullary carcinoma the least dangerous, type. By x-ray treatment inoperable cases had been rendered operable, tumours had been mobilized, and gland metastases reduced and then removed. He believed intensive irradiation for cancer of the breast to be an error. Wintz, the inventor of that method, and other radiologists in Germany, had now returned to the use of the aluminium filter. Personally Professor Iselin said he had never been a believer in intensive treatment; he had never used the "carcinoma dose," and, in fact, so far as he could see, there was no such thing.

The thanks of the Section to the three visitors from abroad were expressed by Sir PERCIVAL HARTLEY and Dr. CLIVE RIVIERE.

WHAT IS COMPARATIVE MEDICINE?

At a meeting of the Section of Comparative Medicine of the Royal Society of Medicine, held on October 26th, Dr. O. CHARNOCK BRADLEY, Principal of the Royal (Dick) Veterinary College, Edinburgh, read a paper entitled "What is comparative medicine?"

The word "comparative," he said, was capable of numerous interpretations, depending on the point of view of the interpreter. It was often considered to be synonymous with veterinary medicine. In the early days of history only one or two animals came within the consideration of veterinary medicine; in a pastoral country like Babylon, in the third millennium B.C., only sheep and cattle mattered, while in a military country like Rome the horse was of paramount importance. Nowadays, however, it concerned itself with a great variety of species, ranging from the horse to cage birds, suffering from different diseases which were not all intercommunicable and which presented different manifestations. Veterinary medicine, then, afforded ample scope for comparisons and could well claim to be recognized as comparative medicine, but it did not include man; and there was no justification for the exclusion of human medicine from comparative medicine, while there was abundant warrant for regarding both human and veterinary medicine as branches of a larger medicine. Both had a similar birth and growth. Both dealt with like problems by like means. Co-operation, long existing between both, had increased remarkably in recent years. There was, therefore, no sound reason for denying to them the collective title of "comparative medicine."

Comparative medicine, however, should have an even wider and more comprehensive connotation. Medicine had been built up gradually from materials imported, and these importations were most clearly evident in the foundations. The cell theory of Schwann and Schleiden, and the discoveries of Leeuwenhoek, were of fundamental importance, although neither worked initially in the interests of medicine. It was never possible to predict when and where the results of research in one branch of science would affect the problems of other branches. Moreover, no one could foresee what provinces of science might not have to be asked to assist in any particular problem. The daily work of the medical man and the veterinary surgeon was essentially analytical; and as it was always easier to analyse than to synthesize, they busied themselves with the relationship of things to man, rather than their relationship to each other. Accordingly this analytical method, invaluable as it was, must be checked and controlled by as extensive a general survey as possible.

Comparative medicine contained elements contributed from widely diverse sources; the physicist, the chemist, the biologist, the pathologist, all helped to accumulate the store of linked ascertained facts which the practitioner took for his use. Thus regarded, it was an instrument for the proper comprehension in true perspective of the problems of human and veterinary medicine.

With little reservation comparative medicine might be considered as standing to applied medicine in much the same relationship as do pure and applied science. Just as

it was impossible to say when the truths of pure science might be applied, so was it impossible to predict when the facts of comparative medicine might form part of applied medicine. The work of Pasteur at first had no semblance of being an adjunct to medicine, and it progressed long and far before it became applied to veterinary medicine, and even longer before it touched human medicine. Comparative medicine, in brief, was a storehouse, be the provenance of its contents what it might, from which human and veterinary medicine could choose such things as were of possible application, and, taking them, give.

JAMES MACKENZIE INSTITUTE.

Physiology of the Stomach.

In a lecture at the James Mackenzie Institute for Clinical Research, St. Andrews, on the influence of diet upon the physiology of the stomach, Dr. JOHN BOYD ORR pointed out that in much of the earlier work on the stomach there was a tendency to limit attention too exclusively to phenomena occurring in the stomach as if it were a semi-independent organ. The work of the past few years, however, has emphasized the close relationship and interdependence of the activities of the stomach and those of the other parts of the alimentary system. A derangement of function originating in any part of the alimentary canal tends to disturb the normal activities of the stomach, and many clinical symptoms located in, or at least referred to, the stomach have their origin in other parts of the system. In discussing the function of sensation, he distinguished between hunger and appetite. The former could be correlated with the contractions of the gastric muscle; the latter, however, depended not only upon the tone of the muscle, but also upon stimuli received from sight, smell, taste, and memory. Instances were given of cases of perverted appetites in animals, and it was shown that these tended to occur on deficiency diets, and that in many cases the abnormal substance craved for was rich in the substances which were deficient in the diet. It was suggested that hunger might indicate a demand for quantity of food, and that appetite was, to some extent at least, an indication of quality rather than quantity.

With regard to the function of secretion, Dr. Orr said that a review of the most modern work indicated that perverted secretion, or excess or deficiency of gastric juice, was of less importance in the etiology of disease than had been formerly supposed. He regarded movement as the function which played the most important part in the maintenance of health and the causation of disease. Recent work had shown that the former conception of the acid-alkali control of the pylorus was untenable. The movements of the stomach, including those of the pylorus, were of the same nature as those of the rest of the intestine, following the law enunciated by Bayliss and Starling. The pylorus was seldom, if ever, in health completely occluded. While the general movement of the food was onward from the stomach to the intestine, there was a normal tidal flow between the duodenum and the stomach, and it was this tidal flow which regulated the degree of acidity in the latter organ. The chief factors which influenced movement were, normally, diet and the emotions. Experimental results showed that the composition of the diet had both an immediate and a remote effect upon movement, the remote effect being produced by an alteration in the circulating fluids of the body. One of the most interesting features of the results of feeding experiments with deficiency diets was not the gross disturbances in the body, but the disturbances of the function of movement in the intestine which led to lesions such as inflammation and ulceration, especially in the pyloric and caecal regions. Discussing the influence of the sympathetic nervous system on the gastro-intestinal movements, Dr. Orr expressed the opinion that emotions such as fear, anxiety, and anger, which stimulated the sympathetic, causing inhibition of movement and contraction of sphincters in the intestine, were an important factor in producing stasis in the lower part of the tract, and that this was often the beginning of permanent lesions.