THE DIURETIC ACTION OF FRESH THYROID JUICE.

By E. HURRY FENWICK, F.R.C.S.,
Surgeon to the London Hospital, and St. Peter's Hospital.

A YEAR ago my colleague, Dr. Sansom, requested me to graft a sheep's thyroid into a case of myxœdema, which was then under his care in the London Hospital. In doing this I departed from the ordinary method, for I split each gland, and before I fixed it in its new position I rubbed the glairy secretion which oozed from the cut section into the subcutaneous tissue. I was greatly surprised next day to find that the patient's temperature had risen from its habitual subnormal level to normal, and that the amount of urine had increased from 20 ounces per diem to 50 ounces. As I could not be sure that this was due to the absorption of the free secretion of the thyroid, I determined to inject thyroid juice hypodermically in the next case of myxœdema I chanced upon. Dr. Sansom soon placed another patient under my care, and my house-surgeon (Mr. Yardley Mills) and I have carried out the hypodermic plan with very striking results.

We are inclined to believe from work which we have done in this direction that the theory of the action of the diseased thyroid gland is incorrect, and that the state known as myxœdema depends upon a perverted renal function. We find that the thyroid juice possesses a distinct diuretic action in diseases of the kidney, though apparently it is negative in healthy persons. Before submitting our patient and results to the Clinical Society we would wish that so simple an injection might be tried, in order that rebutting or confirmatory evidence might be brought forward at the same time. We cannot find any record of the function of the thyroid juice except "that it is quite unknown" (Landois); nor have we come across any intimation in the literature that it has been made use of as a diuretic in renal or cardiac disease, or in the treatment of myxœdema. We have lately learnt that Ewald[1] has asserted that an emulsion of the thyroid produces toxic symptoms. We have not encountered such.

The plan we have adopted is as follows: The urine having been measured and tested daily for a week, a sheep's thyroid, taken warm from the body of a carefully selected animal, is split, and ten drops of juice are mixed in a Koch's syringe with an equal amount of distilled water, and injected with aseptic precautions under the skin of the arm or shoulder blade. Some pain and slight swelling are sometimes complained of, but no inflammatory trouble has resulted. The urine increases in amount during the next day or the day after, and the effect in the myxœdema case continues for fourteen to twenty-one days.

SECTION OF OBSTETRIC MEDICINE AND GYNÆCOLOGY.

W. J. SMYLY, M.D., President.

Porro's Operation.—Dr. CLEMENT GODSON and Dr. JAMES MURPHY read the papers which are published at pages 793 and 795 respectively.—Dr. LEITH NAPIER said that as the most recent successful operator in London by the modified Sänger-Cæsarean section, he ventured to congratulate Dr. Godson and Dr. Murphy. Porro's operation was much more frequently employed, because, as operators were nowadays familiar with hysterectomy, Porro's seemed a less difficult procedure. To contrast the advantages of Porro's over the Cæsarean operation, it was said that the former was more rapid. This was not necessarily the case. He would not enter on the details of his case, but it would be sufficient to say that from the beginning of the operation until the uterus was emptied of fœtus, placenta, and membranes, and the cervix dilated, only six minutes elapsed; the other steps of the operation, including ligation and division of the tubes, suturing of the uterine incision and abdominal wall, took less than forty minutes. The anxiety connected with the *serre-nœud* was always present after Porro's operation, and until the freeing of the wire there was also a distinct risk of sepsis. Further, the shock following Porro's operation must be greater. Dr. Napier related the particulars of some recent cases, and in conclusion, mentioned that, taking all circumstances into consideration, he must with his present knowledge, while expressing his admiration for the skill displayed by the readers of the papers, still say that he believed Sänger-Cæsarean section the more scientific and the preferable procedure in suitable cases.—Dr. HEYWOOD SMITH thought that eventually Porro's operation would come into use instead of the Cæsarean section, inasmuch as the former could be done more rapidly; he was the more convinced of this as surgeons were gradually but surely progressing towards the intraperitoneal treatment of the stump in hysterectomy for fibroids, where they had to face all sorts of growths; it would more easily be taken up in cases of pregnancy where the conditions and relations of the part were similar in each case.—Dr. MURDOCH CAMERON said that he felt confident that Cæsarean section was for several reasons preferable to Porro's operation. No doubt once an operator had done either method with a happy result he would feel inclined to continue his practice. In either method early interference would secure good results, but once the various steps in the Cæsarean section were fully understood, no one would, he believed, hesitate to do it rather than resort to Porro's operation or craniotomy. He had operated twelve times, and might, therefore, call special attention to a few points. He urged first the importance of the early recognition of deformities, etc., and the proper preparation of the patient. This done, the onset of labour should be waited for, and whenever the os was about the size of a florin, the operation should be performed. On no account should the membranes be ruptured. Once the peritoneal cavity had been opened the assistant should not only hold the uterus in the median line, but should see that there was no twisting of the organ, as the opening in such a condition would not be made in the median line of the anterior wall, but nearer the lateral surface, and therefore more likely to be over the site of the placenta. In opening the uterus it was safer to make a very small incision to begin with until the membranes were reached, when the incision could speedily be extended upwards and downwards. The hand was then introduced under the head or to grasp the feet when the child was turned out of the uterus at the same time as the membranes were ruptured. Immediately the cord was cut, the placenta and membranes were removed, and the uterus turned out of the abdominal cavity. Much depended upon the manner in which the assistant grasped the empty organ to prevent loss of blood. Without delay the antiseptic silk sutures should be introduced as described in his paper on Cæsarean section published in the BRITISH MEDICAL JOURNAL. After the wound had been carefully sponged the ligatures should be tied, and if necessary for complete apposition of the lips of the wound, a few catgut stitches could be inserted. A large, flat, warm sponge was then placed over the uterus and compression applied, which speedily caused firm contraction. The Fallopian tubes were then ligatured. Before closing the abdominal wound, the cavity of the abdomen should be carefully examined and cleaned out. As regards the after-treatment, he only allowed sips of hot water for the first twenty-four hours, after which milk was added in increasing quantity. Small pieces of ice also were beneficial and much relished.—Dr. J. A. ROBERTSON asked if Dr. Macewen's suggestion (made in Berlin) to perform resection of the pelvis had been carried out in any case where the pelvis was contracted so much as to require Cæsarean section or Porro's operation.—Dr. HANDFIELD-JONES narrated a case of Porro's operation in which he had been obliged to operate owing to the presence of a large fibromyoma blocking the pelvic passage. In such instances it proved easy to terminate the labour and remove the tumour at the same time, and in such cases Porro's operation would always be superior to simple Cæsarean section.—The PRESIDENT did not consider Cæsarean section and Porro's operation to be alternative operations. The former should be performed unless there were special reasons for doing Porro, such as hæmorrhage, either *ante* or *post partum*, cancer, myoma, ruptured or septic uterus. A woman who wished to have children should not be sterilised since Cæsarean section could be repeated.

Tubal Gestation.—Mr. ALBAN DORAN read the paper published at page 789.—Dr. AUST LAWRENCE drew attention to the importance of early diagnosis in cases of tubal gestation,

[1] *Clin. Trans.*, vol. xxi, sup. p. 74.

remarking that cessation of catamenia with recurring attacks of pelvic pain were very suspicious, and an abdominal section would be easily made. He related a case of rupture of the Fallopian tube where the patient missed her period two weeks, then had one attack of pelvic pain with a small swelling forming by the side of the uterus; twenty-four hours after this she had great pain. The abdomen was opened, the ruptured tube removed, the abdomen cleared of the large quantity of blood, drained, and the patient recovered perfectly.—Dr. CULLINGWORTH agreed that in the light of modern experience and research the great majority of cases of hæmatosalpinx must be classed as instances of early tubal gestation; nevertheless, there was a residuum of cases in which the hæmorrhage had a different origin. In addition to the causes enumerated by Mr. Doran, he would call attention to the rupture of a varicose vein in the tube, as in a case he had shown to the Obstetrical Society of London.—Mr. DORAN, in reply, stated that no doubt cases of tubal abortion and even ruptured tube quieted down without operation, yet the risk of an operation was probably less than the danger of expectant treatment. The menstrual history was very important, yet it must be remembered that cessation of the period did not always mean conception. Mr. Doran admitted that his first theory as to the cause of the rupture of the left tube was questionable. Its obstruction and rupture when its ostium was so abnormally patulous were remarkable.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL.

GENERAL TUBERCULOSIS: JACKSONIAN EPILEPSY.

(Under the care of Dr. COUTTS.)

[From Notes by R. W. WALSH, M.R.C.S., L.R.C.P., late House Physician.]

J. A., aged 8 years, was brought to the hospital on May 5th, 1887, with the complaint that she was rapidly wasting, and suffering from languor and frequent headaches. There was a phthisical family history in both parents, the maternal grandfather and paternal grandmother having both died of phthisis. Seven other children were alive and well; one died of phthisis at 10 years old and one was born dead. The patient had had measles, whooping-cough and varicella, and as an infant suffered severely from thrush. The present illness began three months before admission, with tired and languid feelings, and a month later she commenced to sweat violently at nights. She next suffered from almost constant headache; this was accompanied with feelings of nausea, but there was no actual vomiting. During the last fortnight she seemed to get very much worse; there was more languor, and the child sat about doing nothing. Her appetite failed, and she complained of pain in the "stomach." Lately she has passed very little water, but there has been no swelling of the face or limbs; the bowels have tended to be constipated.

In the out-patient room it was noted that the patient was a dark complexioned child, pale and somewhat wasted; tongue coated with fur to a considerable extent; percussion over both bases seemed deficient, and there were a few scattered *râles* over the chest, but no definite sign of consolidation or other serious mischief; heart normal; abdomen a little full, with some tension of the recti muscles; liver and spleen both slightly enlarged, but not tender to manipulation. In the left iliac fossa a large, slightly movable swelling can be felt, the upper border of which reaches the iliac crest. In addition there were dotted over the surface of the abdomen five or six more coloured spots, indistinguishable from those associated with enteric fever.

During the examination of the abdomen the child was suddenly seized with convulsive spasm of the right side. This at first consisted of clonic contractions of the right upper limb, but after a time the right leg became affected, and was slowly and rhythmically jerked up and down, and there was some slight twitching of the right side of the face. The duration of the attack was some three or four minutes. From first to last there was no loss of consciousness or involvement of the left side. During the attack the child cried out loudly with the pain she declared it caused, but possibly a good deal of the discomfort experienced was due to fright. In answer to inquiries, the mother stated that the child had had four of these seizures, of what she termed "cramps," the first one a month previously and the last one on the preceding day. The distribution, as far as could be gathered, had always been the right-sided one given above. At the end of the fit the thermometer, which had been easily retained in the left axilla, marked a temperature of 102.8°. This on being taken half an hour later in the ward was only 101°, and an hour or so afterwards fell to 99°.

Notwithstanding many of the resemblances to typhoid fever, the child was admitted into the wards with a fairly confident diagnosis of general tuberculosis, with a tuberculous mass, or masses, in the left motor cerebral areas.

May 7th. Last night the patient was suddenly seized with clonic spasms of the left arm and leg. The adductors and hamstring muscles were those chiefly involved. The flexors of the the toes were not observed to be affected. The spasms could not be controlled by the patient and lasted a few minutes. There was no loss of consciousness; temperature normal. Child seems doing fairly well.

May 8th. This morning the patient had another convulsive seizure on the left side, similar to the one above described, but slighter.

May 10th. Although the temperature is slightly raised, and there is more frontal headache, the child seems doing fairly well. Eyes normal, react to light and accommodation. Ophthalmic examination *nil*. There have been no further convulsive attacks.

May 11th. The child is worse; face pale; sometimes cries out loudly; complains of severe headache. No sickness.

May 13th. More listless, speaks very little. Sometimes seems scarcely conscious. Ice-bag applied to head.

May 15th. Very little change. Child lies quietly on back. Can be roused only with difficulty, and often appears completely unconscious.

May 17th. Lies constantly on back and appears almost comatose. Can occasionally understand what is said to her, but makes no articulate reply. Eyelids half closed. Cries out sometimes. No further fit or twitching. Tongue is thickly coated wih yellow fur. Pulse regular. Respiration more or less irregular. Flushes at times, but no increased flush on pressure. Abdomen not retracted; no doughiness. Skin fairly elastic. No discharge from ears. Bowels confined.

May 20th. Not so well. Is very drowsy and requires constant rousing to take food. Screams a good deal. Pulse weak and rapid. No marked delirium, but some slight wandering. Abdomen slightly retracted, but walls not doughy. Temperature 101° last night; this morning has fallen to normal. 10.50 P.M. Patient died.

Post-mortem Examination Thirty-six Hours after Death.—Rigidity passing off. A good deal of *post-mortem* lividity. Head: Meninges slightly inflamed. Pia mater and arachnoid were slightly thickened and adherent to the brain tissue. Very little lymph at base and only two or three tuberculous nodules in this situation, but the meningitis was general. Convolutions somewhat flattened and brain substance very soft and breaking down. Lateral ventricles and iter slightly dilated and containing a little fluid. Foramen of Monro widely dilated. Several small "abscess" cavities in the grey matter. Most of them impinging on and forming slight elevations on the surface. The abscesses appeared to have originated in the breaking down of tuberculous deposit, and several tuberculous nodules were seen in which disintegration was only just commencing. The cavities were all situated in the left hemisphere, chiefly along the free edge of the longitudinal fissure, the largest being of the size of a small Barcelona nut, and the others varying in size down to that of a pin's head. Several abscesses were also found along the left fissure of Sylvius, one in the left hemisphere just above, or adjacent to, the corpus callosum. Another solitary one in left lobe of cerebellum. None found in centre of brain. Brain sub-