tubes as I suppose any other living person, but I never saw a tube in which abnormal patency was a feature. I certainly never saw a normal Fallopian tube—I mean one not distinctly pathological—through which an ordinary uterine sound could be passed. But I have seen several uteri through which sounds could easily have been passed by reason of the thinning of the wall at the outward curve of a chronic flexion, or by the atrophy of the wall at the insertion of a small nodule of myoma. I have also seen two uteri through which the sound or curette actually had been passed, one at the time of an ovariectomy,⁴ and the other recently in a uterus I removed by vaginal hysterectomy. I have also recorded three cases of what appeared to be cases of permanent metro-peritoneal fistula.⁵ One of these cases possesses the fistula still, as I know the patient is alive, and I passed a sound at the old spot about three years ago. In making these observations we never sterilised the sounds, and now it amazes me, if peritonitis is caused by micro-organisms, why we never produced it.

The last case of instrumental perforation of the uterus with which I have met is one of great interest, for the patient had had her appendages removed for myoma some five years before by Mr. Knowsley Thornton with a brilliantly successful result—that is, all the symptoms and troubles due to the myoma disappeared, and she went through a brief and satisfactory climacteric. When I examined her I could find no trace of myoma. The patient had an idea at the time of this operation that the uterus itself ought to have been removed, but of this I was finally able to dispossess her, for it seemed to be an ideal case for removal of the appendages, and the result all that could be wished. I mention this circumstance because she was placed under my care by a well-known Midland practitioner, whose name I do not give because with it the name of the patient might just as well be published. The reason of her coming to me was that for about eight months she had been troubled by an increasing purulent and very acrid discharge pouring out of the uterus. This discharge was extremely offensive, accompanied by pain and interrupted occasionally by hæmorrhages. It made her extremely miserable, and brought back to her mind somewhat bitterly her original desire to have the uterus removed and Mr. Thornton's refusal to comply with it. The remedy I suggested was, of course, the curette, though not without fear that the disease might be endometric ulcerative epithelioma (a very rare condition), and in consequence this might prove insufficient. Just as I had nearly completed the operation the curette went through the anterior wall of the uterus and I could feel its point easily through the abdominal wall. As usual, the accident did no harm; the patient recovered easily and for nine months remained quite well. She came back, however, later with all her symptoms renewed, indeed intensified, and begged me to remove the uterus. I was not much in favour of this proceeding, as I was by this time quite certain that the correct diagnosis was that of epithelioma, and I am not at all favourable to operations for cancer of any kind—I am quite sure that vaginal hysterectomy for *réal* cancer of the uterus will soon go out of fashion. I removed the uterus in this case, however, under the belief that if such a thing were justifiable at all in cancer it was in the rare endometric ulcerative epithelioma which is very like the epithelioma of the lip.

The operation was very difficult, on account of old adhesions, but it was through in about twenty minutes, and then I found a few nodules of myoma at the fundus of a perfectly senile uterus. They were not larger than marbles, and must have been the mere survivals of Mr. Thornton's tumour, as they were wholly unrecognisable before the excision of the uterus. On slitting up the organ I found no trace of epithelioma, but a merely rough and hypertrophied endometrium, quite tough and very vascular. At the base of one of the nodules on the anterior wall, where it was of almost paper thickness, was an unclosed rent, about half an inch across, which had been made by my curette, and the edges of which, but not its lower end, had healed. Here at last was the absolute proof of a permanent metro-peritoneal fistula, through which I have no doubt much of the discharge must have made its way, after its re-establishment, but there was no disturbance from the microbes.

Birmingham.

CASE OF FETAL ENDOCARDITIS ASSOCIATED WITH AN ARREST OF DEVELOPMENT OF THE INTER-VENTRICULAR SEPTUM.¹

By T. C. RAILTON, M.D. LOND.,
PHYSICIAN TO THE MANCHESTER CLINICAL HOSPITAL.

A CHILD aged four years was admitted into the Manchester Clinical Hospital on Jan. 24th, 1895, suffering from broncho-pneumonia. His previous history was to the effect that he had always been a delicate child, did not walk until he was eighteen months old, and subsequently was unable to play about like other children, being easily exhausted and out of breath. He had frequently complained of pain in the region of the heart, but had not suffered from articular rheumatism or shown any blueness in the lips or fingers. Three weeks before his admission he caught cold and had gradually got worse, and when admitted he had well-marked symptoms of broncho-pneumonia, his respiration being 60, pulse 140, and temperature 101° F. The deep cardiac dulness extended upwards as high as the second rib, on the right side nearly to the nipple line, and the apex beat was in the sixth interspace outside the left nipple line. There was no murmur audible. The patient became steadily worse, the temperature continued to rise, at one time reaching as high as 106·2°, and he died twenty-seven days after admission. Four days previous to his death a systolic murmur was audible over the right ventricle for the first time.

At the post-mortem examination both lower lobes were found consolidated, sinking in water, while islets of broncho-pneumonia were scattered over the rest of the lungs. The pericardium contained about two drachms of clear fluid. The heart was very large, mainly upon the right side. The thickness of the wall of the right ventricle was eight millimetres, of the auricle one millimetre. The corresponding measurements of the left side were nine millimetres and one millimetre respectively. The tricuspid valve was the seat of large verrucose vegetations covered with a deposit of fibrin. Close to the tricuspid orifice were a few other vegetations on the auricular edge and one recent irregular ulcer. The remaining orifices and valves were normal, and the ductus arteriosus and foramen ovale were closed. There was a deficiency of the septum of the ventricles about the undefended space large enough to admit a quill. This opening was larger at the side of the left ventricle than on the right side, where it ended between the insertion of two cusps of the tricuspid valve nearer to the right auricle than to the ventricle. The edges of this orifice were quite smooth. It was evident that the lesion of the tricuspid valve had started during foetal life, and it seemed almost equally clear that the endocarditis had also continued its evolution subsequently to birth. A similar case has been reported by Dr. F. Robinson.² A child eighteen months old had suffered from palpitation and dyspnoea since birth. He was not cyanosed. There was a loud sawing murmur accompanying the heart's action. At the necropsy the right ventricle was found to be large enough to contain a hen's egg, and the tricuspid valve was thickened at its free border to such an extent as to prevent its perfect closure. There was also a circular orifice almost as large as the little finger in the septum of the ventricles communicating between the two cavities. The foramen ovale was closed and there were no remains of the ductus arteriosus.

Although the valvular disease of my own case was due to endocarditis, the opening in the septum can hardly be ascribed to the same cause. The edges were smooth and bore no trace of inflammation, and, in fact, the opening exactly resembled those cases of defective development in which there is no evidence of endocarditis in any part of the heart. The question naturally arises as to the possible connexion, if any, between the arrest of development and the endocarditis in this and Dr. Robinson's case. I am inclined to believe that in my own case the defect in the septum may have been the

⁴ Diseases of the Ovary, 4th edition, p. 201. 1883. Cornish Bros.

⁵ THE LANCET, May 18th and Oct. 19th, 1872.

¹ Communication made to the Pathological Society of Manchester, April 10th, 1895.

² THE LANCET, July 22nd, 1848.

cause of the endocarditis. It is evident from the formation of the opening in the septum that the stream of blood would pour during systole from the left side to the right, and it is conceivable that the impact upon the tricuspid valve may thus have given rise to the endocarditis. It would be difficult to ascribe the arrest of development in the septum to the endocarditis and subsequent incompetence of the tricuspid valve, as that theory would entail our dating back the endocarditis to a period anterior to the third month of foetal life; and moreover, had increased pressure within the right ventricle prevented the completion of the septum, one would naturally look for the opening to be larger upon the right side than upon the left.

Manchester.

SOME REMARKS ON TYPHOID FEVER MADE AT A CLINICAL DEMONSTRATION IN THE WARDS OF THE ROYAL BERKSHIRE HOSPITAL, READING.¹

By FRANCIS HAWKINS, M.B. EDIN.,
PHYSICIAN TO THE HOSPITAL.

THE patient was a man twenty-seven years of age who had been a scavenger. When admitted to hospital on June 11th he said that he had had slight diarrhoea on the first day of the month, but continued at his work until the fifth, when he had a shivering fit, and owing to the diarrhoea increasing took to bed. When I saw the case on the eleventh day, shortly after his admission, the house physician took from my dictation the following notes: "The patient complains of frontal headache and diarrhoea. He lies on his back. The face is markedly flushed and his pupils are dilated; his tongue is beefy red, moist towards the edges, but dry at the centre. The abdomen is tumid, tympanitic over all regions, but markedly so over the colon. Two circular pink spots, slightly raised from the surface and disappearing on pressure, are seen in the left umbilical region. The spleen is enlarged upwards, the lower border not being felt; the liver is not enlarged; the heart is normal. There are a few sibilant râles at the base of both lungs. There is no albumen in the specimen of urine examined; the temperature is 102° F." Since admission there have been several successive crops of spots. The temperature has, with one exception, not been above 102°. The bowels, however, have been frequently and profusely active. In addition to this, on the sixteenth day at 4.30 A.M. about one pint of blood, dark in colour and somewhat clotty, was passed, and a similar quantity again at 7.30 A.M. There was no sign whatever of collapse (the temperature, however, which had previously risen a few degrees, fell from 102.6 to 99.2). I wish to refer in this place parenthetically to the occurrence of typhoid fever at various periods of life. While it is most common during the second and third decades, yet it is very prevalent during the first, but it is not by any means common before the second year of life. I have myself never met with a case in a patient under two years and a half old, but Meigs and Pepper record a case as young as one year and six months. In the cases from which my own investigations have been made not one was under two years. Henoch in 256 cases also found none under two years. This fever may in exceptional instances be met with at an advanced age. One case recorded within my knowledge occurred between the ages of seventy and eighty—the exact age was seventy-six. The most advanced age of which I find an account was a case mentioned by Griesinger as having been observed by Hammernyk when the patient was ninety years of age.

[Dr. Hawkins here quoted statistics showing that typhoid fever is most prevalent during the months of August, September, October, November, December, and least prevalent during April, May, June, and July. He proceeded:]

The eruption in this case appeared first on the day of admission. I have it from the previous medical attendant that none was to be seen on the day before admission, but on

the day of admission—the eleventh day of illness—two spots were seen. The typical typhoid eruption is not present in every case; it is, however, more frequently present than absent. As regards adults, it is more frequently present in the male than in the female, being seldom absent in the male. In children it is less frequently present than in the adult. In male children it is almost as frequently absent as present, but in females it is more frequently present than absent.

The date of the appearance of the eruption is worthy of notice. In this case it appeared on the eleventh day. Murchison tells us that the spots appear between the seventh and twelfth days inclusive. In an investigation made by him it was so in 39 out of 46 cases; in 4 only were the spots seen before the sixth day, and that was on the fifth; and in 3 cases the spots were not seen till the fourteenth, and in one case not till the twentieth day. Murchison, however, made no distinction between the date of appearance of the eruption in children and in adults, and as this line of inquiry seems to be of interest and importance I will give some of the results of my investigation. I find that the eruption may appear earlier in children than in adults; thus in the former (of 78 cases) the eruption appeared on the third day in 1 case and on the fourth day in 3 cases. In the latter (adults) in 69 cases the eruption did not appear in one single instance before the fifth day. In 2 cases which I have lately seen the eruption did not appear till the eighteenth day.

The situation of the eruption is almost universally on the abdomen. Among 56 cases where its distribution was particularly noted, in one case only was the eruption absent from the abdomen, and in that instance it was on the chest and back. It is, however, to be remembered that while the eruption is so constantly present on the abdomen it may appear in other parts as well. Thus it may be on the back, chest, between the thighs, on the knees, shoulders, elbows, forearm, neck, and face. It may be very profuse or very scanty. Shortly before leaving London I saw in consultation a case in which the eruption was so general and so widely distributed that the practitioner in attendance thought it of an influenza type. There are other conditions of the skin which must be mentioned, for in addition to sweating and the presence of sudamina there may be erythema, eczema (which is perhaps the least common of any one case out of 240 presenting this condition), urticaria, herpes facialis, and labialis. Abscesses also appear as alveolar, parotid, or on the hips. It must, however, be mentioned that with the exception of erythema the majority of the above-mentioned are met with as sequelæ. And this reminds me of one case I saw while resident physician in the Royal Infirmary at Edinburgh, in which, during convalescence, an abscess formed at the ankle joint, and the os calcis was found to be so much necrosed that the foot was amputated. Previously to the fever no sign of any such condition was present. Boils also may appear: in the experience of some they are of frequent occurrence. The eruption of measles, as also the rash of scarlet fever, may arise during the course of the disease. Desquamation of the skin apart from this cause may also be met with. It was noticed in 11 out of 240 cases, the earliest appearance being on the twentieth day and the latest the thirty-eighth. "Purpura may occur," Fagge says, "in typhoid cases with hæmorrhage from the bowels"; but in 61 cases of hæmorrhage from the bowels (representing a ten years' experience at the Middlesex Hospital) purpura did not occur in one single case. Purpura rheumatica claims two instances. One, a man aged twenty-two years, who had previously suffered from rheumatic fever and hæmoptysis, and in whom a cardiac bruit was present, had on his admission both legs from the knees downward studded with minute petechiæ, and on both ankles and on the dorsum of each foot large hæmorrhagic plaques. For some time the case was regarded as one of peliosis rheumatica. On the sixteenth day typical typhoid spots appeared, and on the twenty-second and twenty-fifth days crops of spots appeared "which became petechial." The other case was a man fifty-two years of age who had petechiæ over the ankles. Both cases recovered. I call special attention to the expression "became petechial," because Murchison says: "When petechiæ occur they are not developed in the centre of the ventricular spots, but are independent." The above case was not seen by myself; it is recorded in the published reports of the Middlesex Hospital, and was noted by such a competent observer as Dr. J. J. Pringle, who was registrar at the time.

¹ I must publicly tender my thanks to the staff of the Middlesex Hospital for their kindness in having placed at my disposal the notes on cases of typhoid fever for the past ten years, whence all my facts not otherwise stated have been drawn.