history shows that the child appeared tolerably well, circulation and respiration being perfectly established and efficiently carried on for twenty-seven hours, and that he lived for fifty-four hours.

Description of the Heart.—The heart, which was normal in size, weight, and situation, consisted of two auricles and but one ventricle, from which a single artery arose, giving off, first of all, two pulmonary arteries, and then, pursuing its course in the ordinary direction of the aorta, gave origin to the usual number of aortic branches. The single emergent vessel, which was both pulmonary artery and aorta in one, was larger than either vessel at birth taken singly, and arose from the right and anterior border of the ventricle. It was furnished with three well formed semilunar valves, and gave origin to the two pulmonary arteries, half an inch after leaving the heart: the pulmonary arteries were situated close together, the left, however, being at a slightly higher level than the right. The right auricle was larger than usual, the left extremely small; the foramen ovale was large and patent; the right auricle received the caval, and the left the pulmonary veins, in the ordinary manner. There was no trace of a ventricular septum, but the left wall of the single ventricle was double the thickness of the right. The auriculo-ventricular valve communicated with the right auricle alone; it was neither clearly bicuspid or tricuspid, but approximated the mitral valve in character rather than the other.

Fig. 1.—External view of Heart and Great Vessels. *a.* Superior Vena Cava. *b* and *h.* Right and Left Pulmonary Arteries. *c.* Right Auricle. *c'.* Left Auricle. *d.* Single emergent Artery, composed of both Aorta and Pulmonary Arteries. *e* and *i.* Right and Left Pulmonary Veins. *f.* Single Ventricle. *g.* Inferior Vena Cava.

The accompanying diagrams will perhaps make plain the foregoing description: they are of natural size; but in the first I have ventured to add more of the emergent artery than is seen in the specimen, in order to explain more clearly the course which the circulation would take in this singular case.

Course of the Circulation in the Triculous Heart.—The blood, leaving the heart by the single vessel, would, first of all, pass into the pulmonary arteries and partially traverse the lungs, whence it would be returned, in the usual manner, by the pulmonary veins, into the left auricle; here, however, it would find but one channel open to it—viz., that of the foramen ovale, through which it would travel, first into the right auricle, and then into the single ventricle. The greater part of the blood, however, would never reach the lungs at all, but would continue along the vessel to be propelled, partly into the three arteries supplying the head and upper extremities, and partly through the

descending aorta to supply the lower parts of the body; the blood from these various sources being all returned in the customary mode by the two caval veins into the right auricle.

Fig. 2.—Internal view of Heart. *a.* Single emergent Vessel. *b* and *c.* Orifices of Pulmonary Arteries. *d.* Auriculo-Ventricular Valve. *e.* Cavity of Single Ventricle. *f.* Cavity of Right Auricle. *g* and *g'.* Pulmonary Veins. *h* and *i.* Superior and Inferior Venæ Cavæ.

Comments.—This case is one of arrested cardiac development about the ninth week of intrauterine growth. At this period, the aorta and pulmonary arteries are composed of a single tube, which subsequently becomes divided into two by a spiral fold, the anterior portion (pulmonary artery) becoming connected with the right ventricle, the posterior (aorta) with the left ventricle. At this same epoch, viz., the ninth week, the ventricular septum is commencing to be formed, but there is frequently no trace as yet of a divisional wall between the auricles. In this case, however, the auricular septum has become developed, whilst there has been complete arrest of the development of the ventricular septum.

CASE OF DISLOCATION OF THE PATELLA ON ITS EDGE.

By W. F. MARSH JACKSON, M.R.C.S., Smethwick.

The patella was turned on to its outer edge, and was firmly fixed between the condyles. Several hours had elapsed since the occurrence of the accident; but there was scarcely any swelling, the patient being a spare, middle-aged woman. The displacement was caused by direct violence—a blow against a door. There was great pain, which the slightest manipulation greatly intensified. I had no assistance whatever. The patient being in bed, I seated myself at the side, and, having raised the foot on my right knee, pressing at the same time with my left hand on the lower part of the thigh, I tried to replace the bone, but it was immovable. I then tried to flex the joint, but this occasioned such acute pain that I desisted at once. Being more than a mile from home, and so from chloroform, and being anxious to go to a labour, I thought I would try to push up the bone out of the groove. I had often noticed that, in my own person, when the foot was planted firmly on the ground the patella was movable upwards; so, raising the patient's foot as high as I could on my right knee as before, I applied the tips of my thumbs to the lower border of the patella, and the palmar surfaces of the two first fingers of both hands along the bone, and pushed up the bone. It readily ascended about half an inch, and then instantaneously righted itself.

In no surgical work which I have seen has this manœuvre of pushing up been noticed. I tried the only methods I had read of or been taught, and failed. Necessity is the mother of invention; so I tried pushing up instead of twisting or pulling down, and I succeeded to my

great satisfaction. It seems to me, now, that to attempt the reduction of these cases by force is very much like attempting to extract a child with the long forceps, regardless of the pelvic configuration. I am not aware whether any one has already recorded a similar plan of treatment, or whether I may claim to be the first to suggest "pushing up" as the proper treatment of these difficult cases.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

REPORT ON THE ADMINISTRATION OF ETHER AS AN ANÆSTHETIC IN HOSPITALS.

THE administration of ether as an anæsthetic is gaining ground, as may be seen by the following reports. No long time has elapsed since we first prominently directed the attention of the profession in this country to the many advantages of ether over chloroform as an anæsthetic agent, the most important being its greater safety. We drew repeated attention to the alarming number of deaths from chloroform, and called on surgeons throughout the country to give ether a fair trial. We ventured to hope that an anæsthetic which had been generally adopted throughout America and many parts of the continent, after extended experience in the use of chloroform, would meet with an impartial trial in this country. In this hope we have not been disappointed. At the same time, a little more interest and energy in so important an inquiry than has yet been shown is desirable. Every surgeon has it in his power to assist in the inquiry, and with very little, if any, extra trouble to him or anyone else. That he has not had a fatal case of chloroform inhalation, and being quite satisfied with that anæsthetic, is not a reason why a surgeon should not aid in solving the question of the relative advantages of ether and chloroform. Many surgeons are very far from being satisfied with chloroform, and dread its results. They would be delighted if it were proved that ether answers practically as an anæsthetic and at the same time that it is a much safer anæsthetic than chloroform. We trust that our appeal will lead to good results, and put us fairly in possession of the truth about ether as an anæsthetic agent.

MIDDLESEX HOSPITAL.

MR. G. EVERITT NORTON, chloroformist to the hospital, writes:—For the past three months, ether has been generally administered at this hospital with satisfactory results. The longest time during which its inhalation has been continued was an hour, in a case of colotomy. The patient did not experience any inconvenience from the anæsthetic, and had no sickness. It is administered at this hospital mixed with air, passed over a vapour of ether at a temperature of about 70 deg. Patients find its inhalation by this method far more pleasant than by the ordinary methods. There appears to be by this plan less struggling, and the patients rapidly become insensible. The average time required for an adult is from three to four minutes, and for a child from one to two minutes. I administered ether in a case of ovariectomy last week. The patient was fully under its influence in three minutes and a half; the operation lasted thirty-five minutes, and, during that time, she only required two ounces and a half. Her pulse became very weak during the operation, and at times almost imperceptible. She was slightly sick about half an hour after the operation, and once again seventeen hours afterwards. She is doing well. The sickness after ether is not more frequent than after chloroform; and, when it does occur, it does not continue so long, but is more severe while it does last. Ether also sometimes causes great excitement a few hours after the operation, which, of course, in some cases—as delicate eye-operations—is a thing to be avoided. A little boy was operated upon at midday for hip-joint disease, ether being administered. In the evening, he became so excited that it was with difficulty he was kept lying down in bed. The rigidity with ether is not more marked than with chloroform, and is soon overcome by pushing the ether anæsthesia. The pulse varies a great deal during the administration of ether; in some cases it has been noticed as high as 140 in a minute, in others as low as 40. In some cases, during the inhalation of ether, there is an excessive secretion of saliva. Patients who have inhaled both chloroform and ether give the preference to chloroform as being far more

agreeable. Consciousness does not return more quickly after ether than after chloroform. In conclusion, ether does not appear to have any advantages over chloroform, unless it be proved to be safer. Patients often complain of the taste of the ether on the day following the operation, and generally smell strongly of it. I have now fixed to the expiratory valve of the inhaler which I use a long India-rubber tube, which conveys the expired ether to the floor. This prevents the operator and assistants from being annoyed by the vapour.

LONDON HOSPITAL.

MR. LEWIS MACKENZIE, house-surgeon, writes:—Our four surgeons almost universally use ether now: Mr. Hutchinson makes the exception in the case of old people, for whom he prefers chloroform. Each house-surgeon has an "anæsthetic record"—that is, a book in which he enters the particulars of every case in which anæsthesia is produced, etc. Ether has been administered sixty or eighty times at this hospital with perfect success. The violence of the "excitement stages" has in certain cases been rather deleterious—as, for instance, to-day, in a case of compound comminuted fracture of the lower jaw, the muscular spasm and talking, during the recovery from anæsthesia after administration of ether, completely shifted all the apparatus, allowing the fragments to get out of position. In such a case, Mr. Hutchinson remarked, chloroform would be judiciously used to keep up a state of anæsthesia originally produced by ether. I have as yet seen no particularly good inhaler for ether. We generally use a towel, in form of a cone, with a sponge. I am not in a position to say anything definite about the circulation, respiration, vomiting, etc., at present.

UNIVERSITY COLLEGE HOSPITAL.

MR. WALTER RIGDEN, resident medical officer, writes as follows.—I have as yet only administered ether twelve times, and consequently have not yet been able to form an opinion of much value. The plan of administration has been that recommended by Dr. Joy Jeffries—i.e., a towel folded into a cone and a piece of lint about eight inches square screwed up and put into the inside. I then pour on to the lint as much ether as I can get it to absorb without soaking through to the towel—generally about an ounce and a half—and tell the patient to breathe deeply. In about four or five minutes he has generally been sufficiently under for slight operations, such as opening abscesses, or examining sinuses; in from seven to ten minutes he has generally been thoroughly under for any operation. Patients have inhaled it well; there has been no more struggling than usually occurs with chloroform; it generally sets up more or less bronchial irritation and flow of saliva, and this may last a quarter of an hour after the operation, but this is not usual. The patients have not complained of more unpleasant sensations either during the administration or afterwards than are often noticed with chloroform inhalation. In three cases out of the twelve there was vomiting afterwards, and in these it was not protracted; one of the other patients felt nausea for an hour or two afterwards, but did not vomit, and two suffered from severe headache for twenty-four hours after the operation. I have used three or four ounces of ether for operations of fifteen or twenty minutes' duration; and in one operation for lacerated perinæum, which lasted seven minutes under an hour, I kept the patient well under with seven-and-a-half ounces. I have not noticed the ether to escape into the surrounding air to any disagreeable extent. From my limited experience, I think that ether answers very well: the chief objection seems to be, that one has to use much more of it than one would of chloroform.

CHARING CROSS HOSPITAL.

MR. DE LA MOTTE, house-physician, writes on December 29th:—Ether, I believe, is to be tried shortly.

THE HULL INFIRMARY.

MR. J. W. PLAXTON, house-surgeon, writes on December 29th:—Ether, so far as I can ascertain, has never been used as an anæsthetic in this infirmary. It will be so used, for the first time, on Wednesday next, January 1st, 1873.

BRADFORD INFIRMARY.

MR. W. L. ROBERTS, house-surgeon, writes on December 26th:—We have not as yet used ether as an anæsthetic. I hope to do so, and I then may be able to give you some information.

YORK COUNTY HOSPITAL.

MR. FRANK H. HODGES, house-surgeon, writes:—Ether as yet has only been employed in the operations performed by Mr. Husband (our other two surgeons being perfectly satisfied with chloroform) in four cases. The first was that of a child aged 13 months, in whom tenotomy was performed for talipes equino-varus. Anæsthesia was induced in three minutes. The child was very sick after the operation. One