ON CERTAIN IMPROVEMENTS IN THE CONSTRUCTION AND USE OF THE LONG AND SHORT MIDWIFERY FORCEPS.

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OUR branch of medicine, having for its chief ends the lessening of the dangers and the abridgement of the sufferings of childbirth, has of late years been materially advanced in both respects by the more frequent and timely use of the midwifery forceps. From the period that this instrument was reintroduced into obstetric practice, in 1554, by Jacobus Rueffe, whose suggestion was first carried into effect by the elder Chamberlein in 1647, to the present day, innumerable have been the attempts to improve its construction; and I have ventured to add to the number by certain modifications in the long and short midwifery forceps, which I shall now submit to the Association. Before doing so, however, I shall make a few practical observations, founded on my experience in the Dublin Lying-in Hospital and in private practice, on the employment of these instruments, some of which are also contained in my *Lectures on the Forceps*. As an examiner in midwifery, I have had occasion to learn that, notwithstanding all that has been recently written in favour of the forceps, its application is still regarded with prejudice by many; and that in some of the text-books which are most in vogue with students, its employment is restricted by rules originally laid down by writers whose experience of this instrument was very limited, and who ascribed ill results to the forceps which were possibly caused by want of dexterity or by delay in resorting to it.

A comparatively short time has elapsed since the value of the midwifery forceps, which, according to Drs. Clarke, Labatt, and Collins, upwards of a century ago was as freely used—in Dublin, at least—as it is at present, has again become appreciated. The disuse of this instrument for so long a period must be ascribed to the rules laid down for its application by Denman, Osborne, William Hunter, and other obstetric authorities, whose aphorisms still exercise a certain though unrecognised influence on obstetric practice. The statistical reports of the great hospital with which I have had the honour to be connected afford the most striking illustration of the long desuetude into which the application of the forceps fell, and of the vast saving of human life and suffering which has resulted from its reintroduction into modern practice. These statistics, an abstract of which I compiled and first published in my *Lectures on the Forceps*, delivered in the hospital five years ago, are interesting in their bearing on this subject. Thus we learn that during the mastership of Dr. Joseph Clarke, from 1787 to 1793, there were 10,387 deliveries in the hospital, only 14 of which were assisted with the forceps, with 6 deaths; whilst no fewer than 49 were delivered by craniotomy, with 16 deaths. In Dr. Labatt's mastership, from 1815 to 1821, the forceps was never resorted to, although 21,867 births occurred in the hospital. During Dr. Collins's time, from 1826 to 1833, the forceps was used in 24 instances, though 16,654 cases of labour occurred. But craniotomy was resorted to in 118 cases.

In the last three years of Dr. Charles Johnson's mastership, from 1842 to 1845, the forceps was used in 18 cases, and the vectis in 11, out of 6,702, whilst the perforator was employed in 54 instances. In Dr. Shekleton's mastership, from 1847 to 1854, the forceps was used in 226 out of 13,748 deliveries. In Dr. McClintock's last three years of office, the forceps was used 56 times, or once in every 60 cases.

Dr. Denham, the late master of the Rotunda, whose tables have not yet been published, was, by precept as well as by example, a strenuous advocate for the timely use of the forceps, as well as a most dexterous operator.

Dr. Johnston, the present master of the hospital, has, however, brought the number of his forceps cases higher than was ever previously the case, and the success of this practice may be seen by comparing the following figures, with those recorded by Drs. Clarke and Collins, by whom the forceps was seldom used.

From November 5th, 1868, to November 5th, 1869, there were 1,159 deliveries in the hospital, of which 81 were delivered with the forceps, and 9 by craniotomy. In 1870, there were 1087 deliveries, with 83 forceps cases with 6 deaths, 2 craniotomy cases with 1 death, and 1 evisceration case. In 1871, there were 1,161 deliveries, 64 being forceps cases, of which 9 died; there were 6 craniotomy cases, with 1 death. In 1872, the forceps was used no less than in 131 cases out of 1193 deliveries, with only 9 deaths, whilst craniotomy was resorted to in 5 cases, with 2 deaths.

In private practice in Dublin, this operation some years ago was still less resorted to than was the case in the hospital. Thus, Dr. J. Clarke, who for nearly forty years enjoyed the largest midwifery practice in the Irish capital, and attended 3,878 cases of labour, once only attempted to use the forceps and failed. Nor, even comparatively recently, does obstetric practice in London appear to have been much better in this respect. For Dr. J. Hall Davis, in his valuable treatise on *Difficult Parturition*, published in 1857, states that he only applied the forceps seven times in 7,371 cases, that is, once in 1053 deliveries.

The great change which has taken place in this respect within the last thirty years may be learned from a comparison of the tables published in Dr. Churchill's work on *Operative Midwifery*, in 1841, with those in the last edition of his *Midwifery*, published in 1872. In the former, the proportion of forceps cases in British practice was stated at about 1 in 351, whilst in the latter we find it has risen 1 in 171.

The mortality in forceps cases is computed by Dr. Churchill—being 1 in 29 of the mothers, and 1 in 5 of the children in hospital practice. In private practice, the mortality appears to be much less than in hospital.

Thus, the same writer, in a paper read before the Dublin Obstetrical Society last session, containing the report of his private obstetrical practice for thirty-nine years, from January 1832, to December 1870, during which time he attended 2,547 cases of labour, tells us that he used the forceps in 42 cases, or 1 in 60, with only 3 deaths, or 1 in 14 amongst the mothers, and only 4 of the children were still-born. Besides these, he employed the forceps in 80 consultation cases, with only 2 deaths.

I shall now submit to the Association an abstract of some tables drawn up from my own forceps cases, in the Dublin Lying-in Hospital and in private practice. Unfortunately, these tables are not quite complete, as those containing the cases which occurred in the Rotunda during the last half year of my connection with that institution, and those of my external forceps cases, have been mislaid. These would probably amount to about fifty more. The cases of which I have preserved notes were those in which I myself applied the forceps in the hospital from the 1st of May, 1868, to the 31st December, 1870; and, secondly, those which have occurred in my practice from the 1st January, 1869, to the 16th July, 1873.

These tables which I now place before the Association contain the date of the operation, patient's age, pregnancy, length of labour, duration of the second stage, the reasons for which operative interference was resorted to, the kind of forceps employed, the sex and condition of the child, and the result to the mother, in each case. As these tables which are now shown would be too long to read to the Society, and perhaps may be deemed too long for publication, I shall merely read an abstract of them. The total number of forceps cases reported in these tables is 148. Of these, 88 occurred in hospital, and 60 in private and consultation practice.

ABSTRACT OF DR. T. MORE MADDEN'S FORCEPS CASES IN HOSPITAL AND PRIVATE PRACTICE.

TABLE A.—Patients' Ages.

Years.....	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	36	38	40	48	Not stated.
Hospital Practice.....	2	5	4	6	8	8	8	9	4	6	10	5	9	1	0	1	2	1	0	1	0	3
Private Practice	2	1	2	4	4	4	4	3	6	1	5	2	6	0	1	0	1	3	1	1	2	10
Total.....	4	6	6	10	12	12	12	12	10	7	15	7	15	1	1	1	3	4	1	2	2	13

TABLE B.—*Pregnancy.*

Pregnancy	1st.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	11th.
Hospital Practice	57	10	2	5	6	2	2	2	0	0	1
Private Practice	32	12	5	3	3	2	0	1	1	0	0
Total.....	89	22	7	8	9	4	2	3	1	0	1

TABLE C.—*Hours in Labour.*

Hours in Labour	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Hospital Practice	1	0	1	0	2	2	3	4	6	4	5	6	6	3	5	2	2	0	2	10	2
Private Practice	0	1	0	1	0	1	1	4	1	1	1	3	0	2	1	8	0	0	1	7	2
Total	1	1	1	1	2	3	4	8	7	5	6	9	6	5	6	10	2	0	3	17	4

Hours in Labour.....	27	28	30	31	32	33	34	35	36	38	40	42	44	48	50	55	60	70	80	84	
Hospital Practice	2	2	0	2	0	2	1	1	3	1	0	0	0	1	0	0	0	0	1	0	
Private Practice	0	1	4	0	1	0	1	0	2	0	3	0	0	1	1	0	1	1	1	1	
Total	2	3	4	2	1	2	2	1	5	1	3	0	0	2	1	0	1	1	2	1	

TABLE D.—*Length of Second Stage.*

Length of second stage in hours....	Under 1 hour.	Over 1 hour.	2	3	4	5	6	7	8	9	10	11	12	18	36	Not stated.
Hospital Practice	5	7	5	10	11	10	10	8	3	2	4	0	2	1	0	11
Private Practice	0	0	3	3	9	7	5	1	1	0	0	0	4	0	1	24
Total.....	5	7	8	13	20	17	15	9	4	2	4	0	6	1	1	35

TABLE E.—*Cause of Operative Interference.*

Cause of Interference	Inertia.	Disproportion.	Rigidity.	Hæmorrhage.	Convulsions.	Ruptured Uterus.	Prolapsed Cord.	Breech. Impacted Head.	Acute Suffering.	Threatened Rupture.	Exhaustion.	Malposition.
Hospital Practice...	49	15	4	2	2	0	3	2	1	1	2	7
Private Practice ...	30	14	3	2	2	1	1	2	1	0	0	4
Total	79	29	7	4	4	1	4	4	2	1	2	11

TABLE F.—*Result to Children.*

	Males Living.	Females Living.	Males Still-born.	Females Still-born.	
Hospital Practice.....	44	37	4	3	88
Private Practice.....	28	23	6	3	60
Total.....	72	60	10	6	148

TABLE G.—*Forceps Employed.*

Forceps employed.	Hospital Long Straight.	Hospital Short Straight.	Madden's Long Double Curved.	Madden's Short.
Hospital Practice	12	35	0	41
Private Practice.....	11	11	14	31
Total	23	36	14	72

TABLE H.—*Results to Mother.*

	Recovered.	Died.	CAUSE OF DEATH IN FATAL CASES.							
			Pyæmia.	Puerperal Fever.	Metro-Peritonitis.	Shock.	Hæmorrhage.	Secondary Hæmorrhage.	Convulsions.	
In Hospital	82	6	2	0	2	1	0	1	1	88
In Private	57	4	0	2	1	0	1	0	0	60
Total	139	10	2	2	3	1	1	1	1	148

These figures must, I fear, seem somewhat of the drier; nor would I venture to occupy the time of the Association with them, were it not that they demonstrate the fact that, compared with any other operation by which labour may be shortened, the application of the forceps, when judiciously resorted to, is a safe operation for the mother as well as for the child. The comparative advantages of the straight and the curved midwifery forceps have been warmly discussed from the days of Leveret and Smellie, by whom the pelvic curve was respectively claimed, to the present time. In this discussion, in which of late years a host of accoucheurs were engaged, Dr. Barnes has, with characteristic ability, led the onslaught on the straight forceps, which was as strenuously defended by the late Dr. Beatty of Dublin, and within the last few months the same cause has been ably espoused by Dr. Leishman of Glasgow. This discussion, however, appears to me to be interesting only on account of the ability with which it has been conducted; the two instruments being perfectly distinct and applicable to very different purposes.

In the Dublin Hospital, during my connection with it, the instrument generally employed was the short straight forceps, twelve inches in length, or, when a more powerful instrument was required, the long straight forceps, sixteen inches in length, which was improved by Dr. Denham, so as to be very efficient in most cases. Since then, however, Dr. Barnes's forceps has come into use in the hospital.

The instruments now before the Association differ in several respects from any with which I am acquainted; and, from some practical experience of their use, I venture to think that the modifications introduced into each of them, trivial as they may, perhaps, separately appear, will be found to facilitate their application, and to increase their utility.

I must premise that, every midwifery forceps being a compressor and a lever of the first order, as well as a tractor, its powers in these respects are dependent on its length and curvature.

The first instrument before us is a short straight forceps, possessing considerable power as a tractor. Its weight is but eight ounces. The length is ten inches, of which six inches are taken by the blades and four inches by the lock and handles; the latter are checker worked. The greatest space between the blades when locked is two inches and seven-eighths, and between the points one inch and a quarter. Great attention has been paid by the maker, Mr. White of Sackville Street, Dublin, to the avoidance of any sharp edges or points. The curve of the blades is by no means as acute as it is in the ordinary forceps, and commences half an inch above the lock, the interfering shank being bevelled internally and bent outwards, so as to form a space for the finger of the operator. The fenestra extending throughout the blades, and being as wide as is consistent with strength, the scalp protrudes through these openings, so as to cover the rims, and thus, to a great extent, protects the maternal passages from any contact with the instrument during the extraction. The shortness of the handle limits its compressing power, and facilitates its application in any position in which the patient may be. This instrument, which may be regarded as a simple tractor, is intended for cases of delay in the second stage of labour; and, having now used it during the last few years with perfect ease and success in upwards of a hundred cases myself, and also had favourable accounts of the experience of many gentlemen, formerly pupils of the hospital, who are now using this forceps in different parts of the world, I venture to recommend it as being easier of application and as effectual in ordinary cases of delay in the second stage of labour as any of the longer or double-curved instruments in general use.

It has been proved by the statistical reports of the Rotunda Hospital, that the dangers of the puerperal state bear a constant relation to the duration of the second stage of labour, which can neither be materially abridged nor materially prolonged without increased risk to the parturient woman. The proportion of deaths from metritis, puerperal peritonitis, and other diseases to which women are subject during convalescence after delivery, is much larger after long protracted labours than in cases in which delivery has terminated within the natural period.

The most frequent consequence of allowing the second stage of labour to run on for an undue time is uterine inertia; and this, in some few instances that have come within my knowledge, has led to fatal uncontrollable *post partum* hæmorrhage, the result of the complete exhaustion of the contractile power of the uterus, which might have been prevented had the forceps been applied in due time.

Laceration, inflammation, and sloughing of the recto-vaginal walls are also results, of which I have seen deplorable instances, of that morbid dread of instrumental delivery under any circumstances, which still seems to influence some. Rupture of the uterus is another, though fortunately rarer, sequence of labour being obstructed in the second stage. Nor is the child then less endangered than the mother; and due regard for its life, as well as for that of the parturient woman,

demands that every accoucheur should be prepared to effect delivery as soon as there is the least indication of danger in the second stage. This he may do with ease and safety in nearly every case by an instrument such as the short forceps, which is so portable that the accoucheur can carry it with him, as I do, in the smallest pocket, and may apply it as soon as its use has been sanctioned by a consultation, without causing the patient the least pain, without altering her position, and even, as I have often done, without her being aware that any instrument was used; and it is so powerful a tractor that it is capable of effecting delivery in any ordinary case of difficult labour, when once the child has entered the pelvic cavity.

The long forceps is applicable to those cases in which it is deemed desirable to assist delivery before the head of the child has passed through the brim of the pelvis.

Dr. Barnes's double curved forceps is, in many respects, an admirable instrument. But it hardly possesses sufficient power of leverage and of compression for some of the purposes for which I consider the forceps applicable. Therefore, I would invite the attention of the Association for a moment to an instrument which possesses greater power as a compressor and as a lever, approaching more closely to the long forceps generally used in France, than to any instrument employed in this country, but differing materially from it. The long forceps now exhibited, though a somewhat formidable looking instrument, is intended to obviate the use of instruments far more formidable, being designed to deliver living children from living mothers in cases which must have eventuated fatally to both, were nature not assisted by art, and in which a few years ago an operation would have been unhesitatingly performed, involving death to the child and greater risk to the mother, for whose sake it would have been destroyed, than attends the application of the long forceps, by which both may be saved.

I regard this instrument as being in great measure a substitute for all child-killing instruments; and by resorting either to it or version, on the indication of premature labour in cases which would otherwise have necessitated craniotomy or cephalotripsy, I have been fortunate enough to escape the performance of either of these operations, which I consider as unjustifiable as well as unscientific when applied to living children.

My long forceps is a double curved instrument, weighing about twenty-six ounces. Its total length is 18 inches, of which 10 inches are occupied by the blades, which, when closed, approximate to within $2\frac{3}{4}$ inches at the widest point, and $\frac{1}{4}$ inch at the extremity, 3 inches by the lock, and nearly 5 inches by the handles, which are movable. By the latter arrangement the instrument, besides being more portable, may be applied as a short as well as a long forceps in the ordinary obstetric position. When a greater degree of power is required, the handles are adjusted, and then the instrument must be used in the supine instead of in the ordinary left lateral position. At the extremity of the handles is affixed a screw somewhat like that of the cephalotribe, by means of which the amount of compression exercised on the child's head may be exactly regulated. Strong shoulders are placed beyond the lock to increase the traction-force of the instrument. The shank between the blades and lock is so long that when applied to the head, however long it may be, there is no danger of the soft parts being nipped by the locking. The curves of the blades are by no means as acute as in the ordinary forceps, in some of which their curvature is that of a section of a circle so much larger than that of the average foetal head that the instrument is in contact with it at only two points on which excessive and injurious pressure must, therefore, be made, and from which the instrument is very liable to slip; whereas in my forceps the blades were carefully moulded on a number of average sized foetal heads, until a curve was obtained which would allow the most complete apposition between the blades and the child's head to which they were applied, and thus the injurious effects of the compressive power of the instrument, as well as the danger of its slipping, are both reduced to the minimum.

The compressive power of the forceps is generally underestimated; and the experiments of Baudelocque are still quoted as being conclusive on the point.

In my lectures on the forceps, published over four years, and in my edition of the *Dublin Practice of Midwifery*, I discussed this question, and need only repeat that by Baudelocque's own showing he was able to compress the foetal head as much as half an inch in three out of nine cases; and, as was long since shown by Dr. Rigby, pressure slowly applied by the forceps to the plastic head of a living child will produce very different results from the violent and sudden force applied by Baudelocque to inanimate structures. Nor can any argument be needed to prove this fact, for everyone who has ever seen a case of labour must be aware of the extraordinary degree of compression the foetal head will bear without the least injury.

Disproportion between the mother's pelvis and the child's head was

the cause which led to the use of the forceps in 29 of my cases, and even a very considerable degree of disproportion may be thus overcome.

It should not be concluded, because a woman has some pelvic deformity, and because her medical attendants in former labours delivered her by craniotomy or cephalotripsy, that we should follow this example. I have applied the forceps in several cases in which craniotomy had been previously resorted to on account of some disproportion. It should never be forgotten that a living child may pass through a pelvis scarcely measuring three inches in its widest diameter, and that, therefore, even a considerable degree of pelvic deformity may admit of the delivery of a living child by the long forceps.

I have also used this forceps in cases of breech-presentation, in which the head was prevented from passing the brim by malposition, and also in head-presentations delayed in the same way. Long delay in labour from a rigid unyielding condition of the cervix uteri led to this operation in several of the cases reported in the foregoing table. The other cases in which I have resorted to the long forceps were chiefly instances of labour complicated by convulsions, by prolapse of the cord, by accidental hæmorrhage before the head had entered the cavity, by exhaustion, by threatened rupture; and in one instance I employed this instrument to effect delivery in a case of rupture of the uterus.

In such cases, where the symptoms are urgent, I have not considered it necessary to wait for the full dilatation of the os, and have never hesitated to employ this instrument, when circumstances rendered it necessary as soon as the os was dilatable, or could be sufficiently exposed.

Still, nothing but the most absolute necessity should ever induce us to deviate from the time-honoured rule that the os should be fully dilated before the forceps are resorted to.

Another rule of great value, though now very frequently disregarded, is that, in ordinary cases of difficult labour from inertia, the forceps should not be resorted to until a trial has been given to other means, such as friction over the uterus, change of position, and stimulating enemata of warm water and salt.

These having failed, and the application of the forceps having been first sanctioned by a consultation, and the bladder being emptied by the catheter, the position of the head should be ascertained immediately before the operation, and a dose of ergot should be administered. The patient is then generally placed under the influence of chloroform, and if the short forceps are to be used she is drawn to the edge of the bed in the usual left lateral semiprone position. The operator should sit facing the perineum, introducing the index and second fingers of the right hand within the vagina behind the symphysis pubis, and feel for the ear of the child. This is deemed unnecessary by some writers; but when the short forceps is used it should be practised, inasmuch as the instrument, fitting better over the sides of the head and face, exerts a more equal pressure, and is less liable to slip than when placed in any other position. The instrument being first warmed and oiled, the upper or pubic blade is to be taken in the operator's left hand as light as a writing pen, and gently insinuated in the axis of the pelvis, by a slight wavy motion, between the two forefingers of his right hand and the child's head until the lock rests on the perineum. In the same manner, using no force whatever, the second or sacral blade is to be introduced, the operator reversing the position of his hands. As soon as the locking is completed, the head is to be very gently drawn downwards and backwards, and then downwards and forwards until the vertex begins to emerge from the vulva, when the blades should be withdrawn, and the head helped out by pressure with the hand on the perineum.

With regard to the application of my long forceps, I have only to say that it is most easily accomplished when the patient is placed on her back and draw down to the foot of the bed; but, when she objects to this, it may be readily accomplished by drawing her hips well over the edge of the bed, and following the same course as that directed for the application of the short forceps, with the exception that it is not so essential to be particular about the position of the child's head, as the instrument must be applied in the largest or transverse diameter of the pelvis, one blade being in each ilium; and hence, as I pointed out in a work to which I have before referred, it is a matter of comparatively little importance whether they are applied antero-posteriorly or transversely over the child's head.

The short forceps now exhibited is, I believe, about the safest instrument of the kind that can be employed, and the long double curved one I hold in my hand is, perhaps, the most powerful. But I must add that an instrument so powerful for evil as well as for good, as any long double curved forceps must be, is not to be rashly resorted to. And when we remember that Smellie, who first introduced the long forceps into this country, was so fearful of the possible abuse of its powers as to abstain

from recommending its use, or even from exhibiting it to his class, we should at least exercise no ordinary discretion in our freer use of what an old writer terms "this noble instrument".

REPORT OF A CASE OF PARACENTESIS THORACIS.*

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PATRICK O'NEIL, aged 22, single, labourer, was admitted into the Newcastle-upon-Tyne Infirmary, under my care, March 5th, 1874. He stated that he had been unable to follow his employment for two weeks, but that he had not been well for three months, having suffered from cough; and that, at the commencement of his illness, he had experienced a severe sharp pain in the left side of his chest, which was made worse by breathing.

At the time of his admission, he complained greatly of difficulty in breathing, of thirst, and of general weakness. On inspection of the chest, it was seen that the left side was stationary during forced respiration, and appeared larger than the right; and that the intercostal spaces were widened, the depressions being effaced. On percussion, the left side was found to be wholly dull, in front from the clavicle to the lower boundary of the chest-wall, and behind as high as the spine of the scapula. Respiration, vocal resonance and fremitus, and tussive resonance, were absent. On the right side, the respiratory sounds were puerile in character, accompanied with sonorous rhonchus; while the voice-resonance and fremitus were very distinct. The right side of the chest at the nipple-line measured $16\frac{1}{2}$ inches, and the left side $17\frac{1}{2}$ inches; the left being a quarter of an inch larger than the right. The heart's impulse was visible and perceptible two and a half inches to the right of the sternum. The sounds were distinct and without murmur. The pulse was 120, hard and small; the temperature was 103 deg. Fahr. He was much emaciated, the biceps readily starting into ridges upon being percussed. He was of the lymphatic temperament, having dark-brown hair, long eyelashes, dark grey eyes, and thick upper lip. He was ordered quinine, and to have the chest well rubbed every night and morning with the liniment of turpentine and acetic acid.

March 11th. The urgency of the symptoms had so increased as to denote serious interference with the functions of life, and it was determined to afford relief by paracentesis. The operation was performed by Mr. George Rowell, junior house-surgeon, with the aspirator, when five-and-a-half pints of a yellowish-coloured clear liquid was withdrawn, which became semi-solid after a short interval. The liquid continued to flow for one hour and a quarter, and during the time the patient was frequently required to inspire deeply. During the passage of the liquid, the heart was observed gradually to resume its normal position, and finally was seen beating in the fifth intercostal space on the left side, about one inch below, and half an inch within, the left nipple. After the operation, the patient appeared much relieved, and voluntarily expressed his comfort. Respiration was then clearly heard in the left infraclavicular region, as also the vocal resonance. He was ordered ten grains of the compound powder of ipecacuanha at bedtime.

March 18th. For the last three days, he had been able to be out of bed, and to walk about the ward. He expressed himself as able to breathe with ease, but still complained of thirst and weakness. His pulse was 120, and temperature 103 deg. Fahr. Vocal fremitus was distinctly perceptible over the left back as low as the eighth rib. Respiration and vocal resonance were also distinctly heard. The percussion-note was clear from the eighth rib upwards. The respiration on the right side was much less puerile, and unaccompanied with rhonchus. The measurement of the right side of the chest at the nipple-line was 17 inches, and the left 17 inches. He was ordered cod-liver oil in combination with the syrup of the iodide of iron, three ounces of port wine, and the full meat-diet.

March 25th. He appeared stronger, and complained less of thirst. His pulse was 110, and temperature 102 Fahr. Respiration was clearly heard at the left base; also vocal resonance.

April 8th. His weight was 8 st. $3\frac{1}{2}$ lb. Pulse 100, and temperature 100 deg. Fahr.

April 22nd. His weight was 8 st. $5\frac{1}{2}$ lb. Pulse 100, and temperature 98 deg. Fahr. He was able to be out in the garden every fine day, and was taking his food with relish. It was noted that his shoulders were equal in height, and that there was no curvature of the spine.

REMARKS.—This case has been recounted with the view of directing attention to the value of the operation of paracentesis in cases of

* Read before the Northern Branch.