

*Practical Midwifery, as observed in the Lying-in-Hospital, Madras, from 1st January, 1857, to 30th June, 1859. By J. L. PAUL, M.D., late Superintendent of the Hospital.*

INSTITUTIONS devoted to the management of special diseases, among other advantages, furnish the means of observing a large number of facts in regard to them in a comparatively short space of time. I have taken advantage of the opportunity which the charge of the Madras Lying-in-Hospital, during a period of two years and a half, afforded me to collect the results and principal details of the cases confined there during that period; and present them in the following condensed Report, in the hope that they may not prove unacceptable to my professional brethren in India, serving as they do to show the working of a novel institution here, and affording, as far as I know, the only data to compare the Statistics of parturition in Asia with those in Europe.

The Report extends from the 1st January, 1857, to 30th June, 1859, and embodies the results of 2,135 confinements. Such tables as are interspersed through the Report have been framed after similar tables in the valuable Report of the Dublin Lying-in-Hospital, by Dr. Collins, during his Mastership.

The adoption of Collins' plan, for such tables as have been given, facilitates the comparison of our results with those well known Statistics, while it embraces all that is requisite.

In the preparation of these tables, and in condensing the details of upwards of 2,000 cases which appear here only as results, I must acknowledge the valuable assistance of Mr. Gorman, the resident Apothecary at the Hospital.

During the period under report 2,135 women were confined in the Hospital; of these 1,824 were cases of natural labor, 130 of difficult, 81 of preternatural, 74 of complex, and 29 of complex, and preternatural labors.

These 2,135 women produced 2,154 children, 25 women having given birth to twins, 2 to monsters not entered as children, and 4 dying undelivered.

Of the 2,154 children born 1,142 were males, and 1,012 were females, or in a proportion of 1.1 males to 1 female or 53.0 per cent. of males.

Of the 1,142 males 1,007 were born alive, and 135 or 11·8 per cent still; of the 1,012 females, 911 were born alive, and 101 or 9·9 per cent., still.

#### NATURAL LABOR.

Of the 1,824 natural cases 466 were women pregnant of their first children. Of these children 38 died, 20 males and 18 females.

Below is given a classification of the duration of the cases of natural labor with the relative frequency of the different varieties.

	Presentation of Vertex.	Presentation of Face.	Presentation of Head and Hand.
Delivered under 6 hours.....	781	1	0
„ between 6 and 12 hours. 660	660	2	1
„ „ 12 and 18 „ 167	167	1	0
„ „ 18 and 24 „ 67	67	1	0

In a few instances, the duration of labor could not be ascertained, and is consequently omitted.

No death from puerperal causes occurred after natural labor.

#### DIFFICULT LABOR.

Includes all cases of delayed labor, whether occurring in the 1st or 2nd stage; but the distinction between delay in the 1st and in the 2nd stage is essential, especially if the delay in the 1st stage is fortunately associated with an unruptured state of the membranes—an association which, however, does not very frequently happen as premature rupture of the membranes, is itself one of the most frequent causes of tedious labor.

Under this head 126 cases are entered in the Returns, of these 58 were cases of tedious labor, in which the parturient act was simply extended over a longer period of time than the ordinary limits, without unusual exertion on the part of the uterus. The greater number of the tedious labors were confined to the 1st stage and had their origin in a rigid state of the Os and structures of the Cervix, or in premature rupture of the Membranes and the consequent escape of Liquor Amnii. One or two cases of extreme obliquity were remarked as causing the tediousness.

Tedious labor is infinitely more frequent in 1st than in subsequent labors. From the following table it will be seen that 36 of the 58 cases occurred in first pregnancies.

No. of Pregnancy...	1st,	2nd,	3rd,	4th,	5th,	6th,	7th,	8th,	9th,	12th.
„ „ Women....	36	5	6	1	4	1	2	1	1	1

The remedy on which chief reliance was placed for the removal of rigid Os was Tarter Emetic, occasionally combined with Cannabis or Opium, the latter, if it was desirable to arrest for a time, “pains more hurtful than useful,” the former, if increased, uterine action seemed desirable. In no instance was the lancet used to remedy a rigid state of the Os. In one case, No. 10, most marked benefit was derived from the artificial dilatation of the Os by means of a sponge tent. The patient had been three days in labor with very strong uterine action,

and yet the Os was only discernible as a depression capable of admitting a female catheter, into it one of the smallest sponge tents was gently insinuated and replaced by a larger one when fully expanded. Large opiates had previously failed to arrest the pains, which were gradually exhausting the woman without expediting the progress of the labor.

Protraction of the 2nd stage of labor, when not arising from disproportion between the head and pelvis, was in most instances caused by inertia of the uterus. In the native of India, especially when the uterus becomes inert, it rarely again discovers more than a feeble attempt at action, and many of the cases who avail themselves of the benefit of this Institution are so long in labor before seeking relief, that the uterus is quite exhausted on their admission. Nothing short of emptying the viscus and entirely relieving it from all action, seems capable of restoring function to the uterine fibre, when a state of complete uterine exhaustion is once established. Nourishment and stimulants fail to do so, and soon the patient becomes irritable and restless; the pulse rises and begins "to run"—symptoms clearly indicative that further delay is fraught with danger. Opium in these cases has been occasionally productive of service, in diminishing the patient's irritability, and obtaining her some rest and sleep, after which uterine action has occasionally supervened, but I must add, *rarely*. Of the efficacy of Ergot in such cases experience does not warrant my speaking favorably, indeed I am unable to adduce an instance in which its use superseded or prevented the employment of the Forceps. Its inefficacy as an oxytocic in exhausted uterus did not, however, prevent the drug being employed as an adjunct to the forceps, or in haemorrhage, to excite the subsequent contraction of the uterus after being emptied of its contents, under which circumstances its use seemed to be attended with better effect.

In the minor degrees when uterine exhaustion was not complete, and where there were no symptoms contra-indicating some delay, Cannabis was exhibited, and in two cases, Nos. 1 and 2, was efficacious in inducing uterine action sufficient to bring the labor to a termination, without interference; but in the great proportion of instances (18 other cases) it had either no effect at all, (6 cases) or only produced such feeble action as to demand instrumental aid, to complete the labor. Unfortunately it has been but seldom prescribed uncombined, so that the cases quoted cannot be accepted as exact observations on the effects of the drug. Nos. 3, 5, 8, 11, and 4, 6, 7, 9, are instances in which the Cannabis restored action feeble, but insufficient to bring labor to a termination, and in which it entirely failed in inducing uterine action at all.

It may be proper here to mention a circumstance, first brought to my notice by Mr. Gorman, viz., the effect of Cannabis in raising the pulse in most cases where it is effective in inducing uterine

action; where it fails to act as an oxytocic, it does not prove an excitant to the pulse.

When uterine exhaustion was more pronounced, and that peculiar state of restlessness and irritability with a rapidly rising pulse which it induces, nothing, as before stated, but evacuating the contents of the uterus is effectual. After a dose of Ergot and a stimulant, the forceps or the crotchet was employed according to the indications of each case.

Deformity of the pelvis is rare among the natives of India, though general smallness is of more common occurrence, in fact, perhaps, rather the rule than the exception; but with a small pelvis, the head of the fetus, fortunately, is also generally small. Disproportion, more or less marked, between the head of the child and the mother's pelvis, existed in 13 cases and called for instrumental interference. When there seemed room for the application of the Forceps, and the Stethoscope indicated the child to be still alive, the Forceps was selected. Where the fetal heart could not be heard, and other signs corroborated the negative Stethoscopic evidence of its death, or where the head was so slightly impacted, that the Forceps could not be used, recourse was had to the Perforator. Hydrocephalic disease was the cause of disproportion in one of the cases alluded to. The duration of labor in the 126 cases of difficult labor is shown in the following table:

Hours in Labor...	12	16	20	21	24	25	26	27	28	29	30	31	33	35
No. of Women....	1	2	1	1	2	3	4	6	6	2	5	2	2	1
Hours in Labor...	36	37	39	48	49	50	51	52	73	76	87	96	104	120
No. of Women....	4	3	1	18	1	2	2	27	2	1	2	15	2	7

The following table exhibits the ages of the different cases above referred to:

Ages of Women...	15	16	17	18	19	20	21	22	23	24	25	26	27
No. of Women....	1	4	11	15	5	12	3	7	2	8	6	11	7
Ages of Women...	28	30	31	32	33	34	35	36	37	38	40	44	
No. of Women....	5	7	3	2	3	1	2	1	2	4	3	1	

The table given below shows in which pregnancies these tedious and difficult labors occurred, and indicates a very great preponderance of difficulty in first labors.

No. of Pregnancy.	1	2	3	4	5	6	7	8	9	10	12
No. of Women...	89	7	10	5	7	3	3	2	7	1	1

The sex of the child has a material influence in giving rise to difficult labor 69 or 54 per cent. of the 126 cases produced male children, and 59 female children; 2 women having produced twins among the number.

Below is given a table shewing the mode of delivery, and the result to mother and child, in these 126 cases of difficult labor.

	Mother Recovered.	Mother Died.	Child Recovered.	Child Died.
Delivered by natural efforts...	57	0	49	8
" " Forceps.....	44	2	27	19
" " Perforation.....	23	2	0	23

It was originally intended to have appended in a very condensed form, a short epitome of all the cases of difficult labor, on which the above remarks are founded, and more especially of such cases as required the use of the Forceps or Perforator; but 126 cases, or even 69 detailed in the most brief way, would have caused this paper to far exceed the reasonable limits of an article; while the cases would necessarily have presented much sameness, so that a few only have been appended, especially such as have been more particularly referred to in the Report.

No. 1.—DIFFICULT LABOR.

Vulleamah *Æt.* 19.—2nd Pregnancy.

Admitted at 6 A. M. 8th Sept., 1858. Said to have been 12 hours in labor. Membranes ruptured 4 hours before admission; pains slight. Os pretty well dilated, but thick and tender. Vulva swollen; pulse 100; skin cool; head presenting in the 1st position; fetal heart audible.

Tinct. Cannabis  $\mathfrak{m}$  x every 15 minutes.

8 A. M. Pains increased after the 2nd dose and continue active. Head descending; pulse same; child born alive naturally at 9 A. M. Placenta expelled 10 minutes after delivery, and was followed by good uterine contraction.

Patient made a good recovery.

No. 2.—DIFFICULT LABOR.

Govindoo *Æt.* 17.—1st Pregnancy.

Admitted 24th October, 1858, at 9 A. M. Said to have been four days in labor. Membranes ruptured 12 hours, and pains gradually decreasing for 6 or 7 hours before admission. Os not fully dilated, rigid and unyielding; head presenting in 1st position. Vulva much swollen; passages cool and moist; fetal heart not audible. 3 doses of Tinct. Cannabis of  $\mathfrak{m}$  x each, administered at intervals of quarter of an hour and a binder applied firmly.

Delivered naturally at noon; child still-born.

No. 3.—DIFFICULT LABOR.

Rungamah *Æt.* 28.—1st Pregnancy.

Labor came on in the early part of the night of the 21st and progressed slowly. Membranes ruptured at 5 P. M. 22nd. Os, pretty well dilated on admission 23rd January, 1858, but the pains soon became very feeble and ineffective. At 7 P. M. ordered 6 doses of Tinct. Cannabis at intervals of half an hour. The pains were sensibly increased after the first two doses, but the head did not descend. At midnight the patient became very restless, feverish and delirious. She was then delivered by the Forceps. There was considerable difficulty in bringing down the head, and the child was still-born; but by persevering in Marshall Hall's "Ready Method," the respiration was restored in half an hour. The placenta was thrown off naturally and the uterus contracted well. Some tender-

ness of abdomen was complained of next day and the following, but she ultimately made a satisfactory recovery.

**No. 4.—DIFFICULT LABOR.**

Khader Bee *Æt.* 27.—6th Pregnancy.

Brought to Hospital at  $\frac{1}{2}$  past 8 A. M. 5th March, 1857. Said to have given birth to a living male child at midnight of the 3rd Instant, since which all uterine action has ceased. On examination, a second fœtus is discovered in utero; its membranes entire, head presenting, Os, pretty well dilated. The placenta of first child has not been detached, nor has there been any hæmorrhage. Pulse 130; skin cool; countenance good; fœtal heart audible. Ext. Cannabis gr.  $\frac{1}{2}$  every quarter of an hour. Apply a binder.—11 $\frac{1}{2}$  A. M. Has taken 6 $\frac{1}{2}$  grains of the extract in 13 doses and is now in a tranquil sleep. Pulse 150. No thirst complained of; passages cool and moist; membranes ruptured spontaneously, this was followed by no pains.

Omit Cannabis—Tighten Binder.

*Vespere.* No change. A stimulating Enema was administered, after the operation of which the pains returned, the head began to descend, and a living female child was born. Hæmorrhage came on soon after delivery; placenta being found partially detached, was removed, and firm contraction induced.

Patient made a good recovery.

**No. 5.—DIFFICULT LABOR.**

Sadamah *Æt.* 21.—1st Pregnancy.

Brought to Hospital on the 16th October, 1858, at  $\frac{1}{2}$  past 1 P. M. Labor said to have commenced 25 hours, and the membranes ruptured 6 hours, previous to admission, since which time pains have ceased. Os pretty well dilated; head presenting and at the brim; passages cool and moist; child alive; urine drawn off. Binder applied.

Tinct. Cannabis  $\mathfrak{m}$  x.

Ant. Tart. grs.  $\frac{1}{2}$  every quarter of an hour.

*Vespere.* Took 6 doses; pains good; head descending.

Omit the Cannabis.

17th. Pains continue, but are becoming feeble. Head at outlet; fœtus alive; vaginal discharges thick and yellow like fluid feculence; pulse 140; skin cool.

Delivered by Forceps; child alive; placenta thrown off naturally, and was followed by good uterine contraction. Patient made a good recovery.

**No. 6.—DIFFICULT LABOR.**

Nacheram *Æt.* 28.—4th Pregnancy.

Brought to Hospital at 11 A. M. 18th November, 1858. Said to have been 5 days in labor, the 4 latter of which were passed with little or no pains. No pains present on admission. Os, fully dilated, excepting a small portion of anterior lip. Head presenting in right fronto-otyloid position.

Tinct. Cannabis  $\mathfrak{m}$  x.

Uterine action returned feebly, and at 1 p. m. the Forceps were used. Child born still. Hæmorrhage occurring, the placenta was removed, and Ergot and Brandy administered, after which the uterus contracted firmly, and the patient made a good recovery.

No. 7.—DIFFICULT LABOR.

Alamaloo *Æt.* 24.—2nd Pregnancy.

Brought to Hospital at midnight of 9th Sept., 1858. Said to have been three days in labour. Membranes ruptured 12 hours before admission. Os partially dilated, thick and undilatable. Uterine action feeble; passages moist and cool; pulse tranquil; skin cool; head presenting; fetal heart audible.

Purgative Enema and Binder.

Tinct. Cannabis  $\mathfrak{m} \times$ .

Ant. Pot. Tart. grs. one-fifth every half hour for 6 doses.

7 A. M. 10th.—Little or no uterine action; pulse 98; skin cool; Os rather more dilated, soft, and dilatable. At 1 P. M. as there was no return of uterine action, the vulva swollen, its secretions becoming serous, the patient restless, with her pulse at 104, caput succedaneum large; the Forceps were applied and much difficulty was experienced in bringing down the head. Child born still, the means employed for its resuscitation failed.

Hæmorrhage followed delivery, necessitating the removal of the placenta, and some difficulty was experienced in securing a satisfactory contraction of the uterus. Patient had a rigor some hours after delivery, which was followed by a good deal of abdominal tenderness and other signs of peritonitis; yet, notwithstanding, she made a good though somewhat slow recovery.

No. 8.—DIFFICULT LABOR.

Chelley *Æt.* 32.—6th Pregnancy.

Brought to Hospital at 5 P. M. 5th Feb., 1857. Stating that labor came on 6 P. M. of the 2nd, that the membranes ruptured on the morning of the third, after which the pains gradually decreased. Pulse on admission 116; skin cool; passages moist, cool and well relaxed. Head at brim in the first position; pains very feeble; bladder full. Fetal heart pulsating weakly and irregularly.

The bladder having been emptied, a stimulating Enema was administered and a binder applied, and she was ordered  $\mathfrak{m} \times$  of Tinct. Cannabis every 15 minutes till 4 doses were taken. A slight increase of the pains was observed, but the head did not descend. Pulse at the same time increased to 122, and the fetal heart became more irregular and weak. At 7½ the long Forceps were applied without difficulty, but the head was so strongly ossified that it required much force to close the blades. This done, very powerful traction was exerted for half an hour, but not the slightest advantage was gained. Considering the length of time the woman had now been in labor, the difficulty experienced in attempting to deliver by the Forceps, and that the patient had already evinced symptoms of constitutional disturbance,

(restlessness and a frequent pulse) the Perforator was introduced. The cerebral matter being evacuated, there was still great difficulty in bringing down the head by the Craniotomy Forceps. The uterus contracted well and expelled the placenta in a few minutes.

Patient made an excellent recovery.

No. 9.—DIFFICULT LABOR.

Palliam *Æt.* 18.—1st Pregnancy.

Admitted at the commencement of labor on the 30th May, 1857. Pains slight; Os very little dilated; Purgative Eneema on the morning of the 31st; there being no change in state of the case, and the bowels not open, she took a purgative draught which acted three times. Action of the bowels was not followed by increased uterine action, but the Os was found on examination to be the size of a dollar, its margins thick and tense, tenderness in hypogastric region, and neck of uterus complained of. Pulse natural; skin rather hot; micturition difficult. Took *Ant. Tart. grs.*  $\frac{1}{2}$ , and *Tinct. Cannabis ℥ x.* every half hour for eight doses. This produced no other effect than slight drowsiness.

The progress of events was not further interfered with, but the patient was carefully watched. On the evening of the 2nd Instant the Os was reported as nearly fully dilated, though the pains continued very slight. At 8 P. M. she began to be restless and to complain much of the pains. The passages though cool and moist, were found tender. Pulse 90; skin cool; a few inhalations of chloroform soothed her for a time, when the bladder was emptied and the Membranes broken by the finger. The head was found presenting in the 1st position and gradually descended, the pains at the same time increasing.

By 6 A. M. 3rd, tumour of the scalp appeared at the vulva, but in 3 hours had made no further progress, when the Forceps were applied and delivery completed. The placenta was removed in 15 minutes, on account of hæmorrhage, and in doing so it was found that hour glass contraction of the uterus had taken place. This was overcome in the usual way, and the patient made a good recovery.

Child resuscitated after much difficulty.

No. 10.—DIFFICULT LABOR.

Alamaloo *Æt.* 35.—1st Pregnancy.

Brought to Hospital at 6 A. M. 6th September, 1857. Three days in labor, and the pains reported as having been very strong all the time.

On examination, the neck of the uterus was found expanded and there, forming as it were, a membranous covering over the fetal head, and presenting a smooth uniform surface, on which the Os uteri could not for some time be discovered. A small depression was noticed, and on careful examination proved to be the Os just large enough to admit the point of a small female Catheter. Pains distinctly uterine and very powerful; fetal heart audible. Lest the neck of the uterus

should be torn off by the powerful pains which failed to open the Os, a full opiate was administered and repeated, but without checking the pains in the slightest degree. At 7 P. M. she was ordered  $\frac{1}{2}$  of a grain of Tartarized Antimony every quarter of an hour, and at the same time a sponge tent was cautiously insinuated into the orifice. This had the desired effect. The tent was replaced by a larger one after an hour and a half, and *then* the bag of membranes began to act.

At 9 $\frac{1}{2}$  P. M. the dose of the Antimony was doubled and continued till 4 A. M. 7th, when vomiting came on.

7th. 11 A. M. Os fully dilated; membranes ruptured; pains not quite so strong as in the night; head presenting. As labor had continued long and symptoms of exhaustion were shewing themselves, she was delivered by the Forceps of a living child, and made afterwards an excellent recovery.

#### NO. 11.—DIFFICULT LABOR.

Mrs. S. *Æt.* 44.—8th Pregnancy.

Brought to Hospital at 5 P. M. 23rd September, 1857. Stated to have been 37 hours in labor, at the commencement of which the membranes are said to have ruptured. Os, thick and tense, and not fully dilated; passages hot; head presenting in 1st position; pains good but not effective. Ordered Tinct. Cannabis  $\mathfrak{m} \times$  with Tartarized Antimony grain  $\frac{1}{2}$  every half hour for 6 doses.

By midnight some progress, but not in proportion to the severity of the pains—the anterior lip was found tightly stretched across the head and seemed to impede its descent. It was gently pushed up during a pain and remained so, but still the head did not advance. At 3 A. M. 24th there was still no progress. She was delivered by the Forceps.

The child which was very large and weighed 12 lbs., was born still, and all attempts to resuscitate it failed.

Placenta thrown off naturally in 20 minutes, and good contraction followed.

Patient recovered satisfactorily.

#### PRETERNATURAL LABOR.

##### ORDER I.

The two orders comprising this class of labor are so essentially different in every respect that the observations on them must be offered under separate heads.

##### 1st ORDER OF PRETERNATURAL LABOR.

###### *Presentations of the lower extremity.*

Of these, 55 cases occurred during the period under report, exclusive of preternatural labors occurring in twin cases, of the 55 children presenting by the breech or feet, 30 were still, 16 males, and 14 females. All the mothers recovered.

Below is given a table shewing the duration of labor, the ages of the patients, and the particular pregnancy in these cases.

Ages of Women.....	17	18	20	21	22	23	24	25	26	28	30	33	34	35	38	39	40	
No. of Women.....	2	3	5	1	2	1	3	6	7	5	9	4	1	3	1	1	1	55
Hours in labor.....	1	2	3	4	5	6	7	8	10	11	12	13	14	15	16	19	39	
No. of Women.....	4	4	6	2	10	6	5	3	2	1	5	1	1	1	1	2	1	55
No. of Pregnancies	1	2	3	4	5	6	7	8	9	10								
No. of Women.....	12	3	14	5	7	5	8	2	1	1								55

With the exception of one, given shortly below, all these cases were delivered by the natural efforts.

#### PRETERNATURAL LABOR.—ORDER I.

Elizabeth *Æt.* 28.—3rd Pregnancy.

A slight delicate woman, admitted into the labor ward at 5  $\frac{1}{2}$  P. M. 14th July, 1857, stating that pains came on an hour before.

Os uteri, the size of a rupee; membranes ruptured; breech presenting; the pains slight.

A purgative Enema was given, and a binder put on. By the following morning the Os uteri was pretty well dilated, but at noon no further advance having been made, an attempt was made with the finger to bring down the breech, but without success.

As the woman was in a very feeble state, the Forceps were then put on, and by steady and powerful traction the head was brought into the pelvic cavity; but the instrument had to be withdrawn, on account of the extreme distension of the perinæum. Further assistance was rendered by the blunt hook applied to one of the groins. The head, however, offered much resistance; could not be brought through the cavity and was perforated behind the ear, after repeated attempts by powerful traction, had failed to extract it.

The child was large in proportion to the passages, and every step of the operation was attended with much difficulty, the pulsations of the fetal heart had ceased sometime before the head was perforated.

The placenta came away immediately after, and then a few large gushes of blood, but good uterine contraction was soon secured by two doses of Ergot, the cold douche and kneading the uterus with the hands.

This woman was delivered of her first child by Forceps.—Recovery.

#### PRETERNATURAL LABOR.—2ND ORDER.

*Presentations of the upper extremity.*

The cases comprising this order are fortunately less frequent, than presentations of the lower extremity, as they are infinitely more dangerous both to mother and child, especially the latter. Among the cases under report, 25 in number, 1 mother only was lost, and she (No. 6) was removed from the Hospital in a dying state from rupture of the uterus. 19 of the children were born still. Of the 25 cases 6 were eviscerated, 4 born by spontaneous expulsion, and 15 turned; (one by cephalic, and 14 by pedalic version,) of the latter only five were saved, and this is, perhaps, to be accounted for by the lateness at which many of the cases sought relief. It is impossible to give the

whole 25 cases in appendix from the space they would occupy, but an analysis of them shows that in most of those cases in which the children were born still, the membranes had been ruptured many hours, while those in which the children were born alive, were cases in which turning was effected soon after the rupture of the membrane, (cases Nos. 3 and 4,) or, in when uterine action remained in abeyance after the rupture of the membranes, as in No. 2.

Perhaps there are no cases more mismanaged by the native practitioners of the art of Midwifery than the class now under consideration. Shoulder and arm presentations are always cases of anxiety even to the experienced Accoucheur, and demand often great patience and judgment on his part. It cannot therefore be matter of great surprise that they should be mismanaged by those who are entirely ignorant, not only of the mechanism of version, but still more of that knowledge which enables the practitioner to discriminate when, and under what circumstances exactly, version should be undertaken in presentations of the upper extremity, and when other means ought to be adopted. Their usual mode of effecting delivery in such cases, is to drag the arm forcibly into the vagina, and by continuous traction on it to pull the shoulder and trunk through the pelvic cavity. Where the child has become putrid, or is premature, or where these two conditions are combined, this rude sort of obstetrics is no doubt sometimes successful in effecting delivery; but rupture of the uterus, or the exhaustion and death of the mother, is a far more frequent sequence.

The case of Caroline (given under the head of ruptured uterus,) seems to have been an instance of the former, and is given under that section, as it presents the peculiarity of the uterus continuing to contract after rupture.

Occasionally the arm is separated from the trunk in these rude attempts to drag it through the mother's pelvis, and they do not always desist from such barbarous violence when they have effected such mutilations. Cases 4 and 6 are instances in which this occurred in a limited degree, in one the clavicle was fractured and the chest much bruised; in the other the arm was found attached to the trunk by integuments only.

It is not in shoulder presentations only that the presenting parts are violently dragged at, but whatever can be seized in the vagina, whether hand, foot, or prolapsed Funis.

This practice no doubt converts not a few cases into cross births, that would be expelled by the natural efforts if not interfered with. Presentations of the head and hand together are not very numerous, but all such as do not come into Hospital before rupture of the membranes are converted into cross births, by the hand being pulled down. No. 1, appears to be a case in point.

The number of cases eviscerated appears large; nearly one-fourth of the whole, but turning is a hazardous operation, where the child's

body has been forced at all low into the pelvis, and under such circumstances can hardly be held to offer the child the smallest chance of life, for the amount of pressure to which it has been subjected, while its trunk is being forced into the pelvic cavity is incompatible with life, while evisceration in itself, scarcely adds any danger to the mother's condition. Even when the trunk is not forced low or impacted in the pelvic cavity, if the waters have been long discharged, and the uterus in action, there is no great hope of life being preserved.

The large amount of infantile mortality in cases where the waters have been long discharged shews this, and could the death of the child in these have been absolutely ascertained, the number of eviscerations would have been greater, as it is no doubt a safer mode of delivery to the mother than turning, even when the child has made no progress into the pelvic cavity. The negative sign of not hearing the fetal heart is, however, of course not conclusive of its death, though even that negative sign, if once heard and subsequently it cannot be so, amounts nearly to certainty; but in these cases that link was wanting, for the fetal heart had never been heard at all.

It is necessary to remark that the cases of spontaneous expulsion were premature children about the 7th month, and that they were expelled without any extraordinary or inordinate efforts on the part of the uterus, and they had made some progress in that mode of delivery before they came under observation, vide case No. 12, which is given as an example of these cases, and in which the child is supposed from its small size to have been premature though it was not otherwise known to be so.

Here follows a table showing the principal facts in regard to the cases of presentation of the upper extremity referred to in this Report, and, after it, is appended a short account of 12 of the principal cases referred to.

Ages of Women.....	16	20	22	23	24	25	26	28	30	36	38	40			
No. of Women.....	2	2	1	1	3	2	6	3	2	1	1	1	25		
Hours in Labor.....	2	3	5	3	12	14	15	19	22	24	28	32	43	72	96
No. of Women.....	1	3	2	1	2	1	1	2	1	2	1	2	1	3	2
No. of Pregnancies..	1	2	3	4	5	6	7	10							
No. of Women.....	5	4	4	4	3	2	1	2							25

#### NO. 1.—PRETERNATURAL LABOR.—2ND ORDER.

##### Vulleamah Æt. 35.—7th Pregnancy.

Brought to Hospital at 1½ P. M. 20th June, 1857, in labor, since 3 A. M. the membranes ruptured and an arm protruding; no pains; pulse 116; skin slightly hot; no restlessness; Os uteri not very well dilated; fetal heart audible. ʒi. of Tinct. Opii. given, and at 3 P. M. she was put under the influence of chloroform and delivered by version with much difficulty, owing to the contracted state of the uterus and the passages. The child was born still, and the means employed for its resuscitation failed, the placenta came away naturally in twenty minutes, and a good contraction took place (ʒss.

of Ergot was given previous to the birth of the head.) At bed time she took an opiate draught and slept well. Made a good recovery.

**No. 2.—PRETERNATURAL LABOR.**

Paupah *Æt.* 26.—1st Pregnancy.

Brought to Hospital at 10½ A. M. 6th July, 1857, with the left arm of a mature fetus born. The child lying in dorso anterior position; pains very slight; version effected easily soon after 11 o'clock under chloroform, when the shoulders were born; difficulty was experienced in bringing down the head, from the chin hitching against the brim and not turning sufficiently backwards into the sacrum. This was with some difficulty rectified by the fingers, and the head brought down on the perineum; child born still; usual means of resuscitation failed. Recovery.

**No. 3.—PRETERNATURAL LABOR.**

Ragavah *Æt.* 28.—2nd Pregnancy.

Admitted at 6 A. M. 26th July, 1857, in labor from midnight. Os uteri pretty well dilated, soft, dilatable and cool; the membranes unruptured, flabby, and protruding from the Os uteri. On examining for the presentation a hand was distinctly felt within the membranes, which were then broken, the hand passed up into the uterus, and the fetus found lying across the brim, with both arms presenting. The head was now seized and placed in the first position at the brim of the pelvis, and the waters allowed gradually to run off, till the head was fairly engaged in the pelvis. A binder was afterwards put on. The pains continued slight till noon, when they began to increase, and she was delivered without any further assistance of a living child at 7½ P. M. Made a good recovery.

**No. 4.—PRETERNATURAL LABOR.**

Minchee *Æt.* 16.—1st Pregnancy.

Brought to Hospital at 2½ P. M. 21st August, 1857, with the left arm of a mature fetus protruding from the vulva; uterine action not strong; labor pains said to have commenced 22 hours, and the membranes to have ruptured 9 hours previous to admission: fetal heart not audible; passages cool, moist and dilatable; no restlessness present; version was performed without difficulty; the child born still; its left arm, shoulder and breast much swollen, and the calvicle of the same side broken (apparently by violence used for delivery previous to admission); the uterus contracted well and expelled the placenta in a few minutes.

She took an opiate draught at bed time, slept well, and made a satisfactory recovery.

**No. 5.—PRETERNATURAL LABOR.**

Vadavulla *Æt.* 26.—4th Pregnancy.

Brought to Hospital at 10 A. M. 20th February, 1857. Said to have been in labor the whole of the previous day; pulse 98; skin cool, but no uterine pains; Os uteri dilated, sufficient only to admit the point of a finger; the passages cool and moist; the uterine tu-

mor hard and inelastic; and the fundus unusually prominent; no fetal sounds detectable by the Stethoscope. Her bowels were acted on by a strong purgative Enema, and at bed time she took an opiate draught and slept.

At 8 A. M. of the 21st the Os uteri was a little more dilated, and the membranes could be felt, but not the presentation. In the evening she called attention to her clothes, which were wet with Liquor Anni. On examination found the Os in much the same state, with the head apparently presenting. A binder was applied, and a draught containing Magnesia Sulph.  $\mathfrak{z}$  i., Ant. Pot. Tart. gr.  $\frac{1}{2}$ , Aquæ  $\mathfrak{z}$  i., ordered to be taken every hour till nausea or free purgation was produced, in the hope of inducing relaxation of the Os, but 8 doses had no other effect than that of moving the bowels two or three times scantily.

22nd. Very slight increase in the size of the Os; the parts cool and moist, and the presentation can be made out to be the shoulder in the dorso posterior position, R. Ant. Pot. Tart. gr.  $\frac{1}{2}$ , Aquæ  $\mathfrak{z}$  i., m. q. q. hora sumend. Tighten binder.

6 P. M. Os thinner, posteriorly and slightly more dilated; feeble uterine action perceptible during an examination; passages hot; pulse varying from 128 to 138; bowels moved once.

Add Tinct. Opii  $\mathfrak{m}$  xl. to next draught.

10 P. M. The shoulder is protruding a little from the Os, which is not more dilated, admitting two fingers only, the passages cooler; pulse the same; patient restless.

Omit Ant. Pot. Tart.

R. Tinct. Opii  $\mathfrak{z}$  i., Aquæ  $\mathfrak{z}$  i., m. st. 23rd 2 A. M. Pulse 110; passages cool; Os the same; has slept some.

R. Tinct. Opii  $\mathfrak{m}$  xl., Liqr. Ant. Pot. Tart.  $\mathfrak{z}$  i., Aquæ  $\mathfrak{z}$  i., m. st.

23rd, 6 A. M. Slept pretty well; Os well dilated, and the left arm of fetus protruding; slight uterine action perceptible; fetus emphysematous; the passages are hotter, and the pulse has again risen to 140.

At  $\frac{1}{4}$  to 8 A. M. the arm was drawn down, the perforator introduced, and the thoracic and abdominal viscera removed. Delivery was then effected by the hook, but the head was expelled by the uterus after extraction of the body. A draught of Ergot  $\mathfrak{z}$  ss., Brandy  $\mathfrak{z}$  i., Water  $\mathfrak{z}$  i., was now given (8 $\frac{1}{4}$  A. M.)

In a quarter of an hour she complained of difficulty of breathing, and pain at epigastrium; the pulse was weak, and the countenance pale and anxious.

The binder being removed, the uterus was found distended and as high as the umbilicus. The hand was immediately introduced into the uterus, when its cavity was found filled with coagula, these were speedily removed, the fundus compressed by the hands, and held firmly down, whilst cold water in a stream was poured over the hypogastric region, and occasionally in the patient's face. For a time

these means promised well, but as soon as they were suspended, the uterus began to relax again.

The Ergot and brandy were repeated twice, electro galvanism applied to the uterus, cold water injected into its cavity, and as soon as ice could be procured, it was also used freely, both internally and externally, but all failed to produce a firm contraction. The hæmorrhage had, however, ceased by 10 o'clock, and it was deemed prudent to desist from further manipulation of the uterus, so long at least as hæmorrhage did not return, which in the mean time was carefully and assiduously looked for, the hand being retained over the fundus.

At 10½ a. m. no hæmorrhage returning, and the patient being very low, a draught composed of Tinct. Opii. ℥ xl, Brandy ℥ i, Water ℥ i was given and repeated at 11 a. m. The pulse gradually rose after the first draught; patient calm, and complained of less dyspnoea. Brandy and conjee in small quantities every half hour. *Vespere*—Has rallied and slept, eight ounces of brandy have been given since morning, and the stomach has retained all.

R. Tinct. Opii. ℥ xl, Brandy ℥ i, Water ℥ i, *℥. s. s.* continue arrowroot without brandy, every 3 or 4 hours.

24th. Pulse 102; no pain whatever; lochia offensive and scanty. Fomentation to abdomen. *Vespere*—Pulse 124; skin hot; slight tenderness on pressure in uterine region.

R. Opii. gr. i. Pulv. Antimonii. Co. gr. iij. m. *℥. s. s.* continue fomentation.

25th. Pulse 130; skin hot; slight abdominal tenderness; abdomen tympanitic; bowels not open; lochia scanty and offensive; was delirious and very low at 9 p. m. last night, when small quantities of opium and brandy with conjee given, with relief to symptoms. A blister applied over lower portion of abdomen. Hydrarg. Chlorid. gr. i., Pulv. Jacobi. grs. ii. m. st. q. q. hora sumend Enema purgans *c* ol: Terebrinth ℥ ss. St. Arrowroot in small quantities frequently.

*Vespere*—Blister has risen; bowels moved pretty well after a second Enema; no delirium; skin perspiring; pulse 128, firm; no thirst; lochia the same. Removed by her friends contrary to advice, but reported as having recovered slowly.

#### NO. 6.—PRETERNATURAL LABOR.

Kistnah Bahee *Æt.* 20.—3rd Pregnancy.

Brought to Hospital 24th April, 1858, at 3 a. m. Said to have been 30 hours in labor; membranes ruptured 17 hours before admission; left arm found lying in vagina while the head could be felt behind it; Os not fully dilated, but soft and dilatable; pulse good and regular; no pains; fetal heart audible.

Slight pains soon returned, during which the arms descended, so that the shoulder could be easily felt, while the head was gradually pushed away by the action of the uterus.

By 6½ the Os being sufficiently dilated, she was put under the influence of chloroform, and version performed without difficulty.

The birth of the head was delayed by being tightly embraced by the Os uteri. The Forceps were therefore applied posteriorly, and delivery effected; child born still. Hemorrhage soon after the birth of the child rendered the immediate removal of the placenta necessary. Patient recovered satisfactorily.

**No. 7.—PRETERNATURAL LABOR.**

Vendamah *Æt.* 28.—6th Pregnancy.

Brought to Hospital at 8 P. M. 30th June, 1858. Three days in labor; on admission the right arm of the fœtus was seen protruding from the vulva; membranes ruptured 12 hours before admission; little or no uterine action; pulse good; skin natural; fetal heart audible.

Version easily effected—child born alive.

Patient recovered satisfactorily.

**No. 8.—PRETERNATURAL LABOR.**

Davanay *Æt.* 26.—3rd Pregnancy.

Brought to Hospital at 4 P. M. 18th July, 1858, with the left arm of fœtus born; labor said to have commenced 32 hours, and the membranes to have ruptured 8 hours previous to admission; arm much swollen, but fetal heart audible; uterine action feeble; version performed without difficulty; child born alive; placenta came away naturally; good recovery.

**No. 9.—PRETERNATURAL LABOR.**

Chouryamah *Æt.* 26.—4th Pregnancy.

Admitted into the labor ward at 2 P. M. 30th August, 1858, immediately after which the waters escaped, and the right arm was born, Os found fully dilated and version at once performed; child born alive; good recovery.

**No. 10.—PRETERNATURAL LABOR.**

Rookmanes *Æt.* 24.—2nd Pregnancy.

Brought to Hospital at 9 P. M. 18th December, 1858, with left arm of a fœtus born; It is stated that she has been three days in labor and that the arm was born on the 1st day. No signs of fetal life; no uterine action; passages hot and dry; Os thin, tense unyielding and tightly embracing the shoulder, pulse extremely quick, though of good strength; thorax perforated and viscera of thorax and abdomen removed, after which the crotchet was fixed on the spine and the body gradually and carefully drawn through the Os.

Placenta removed for hemorrhage—patient recovered slowly but satisfactorily.

This woman was delivered of her first child also an arm presentation by version.

**No. 11.—PRETERNATURAL LABOR.**

Amboogum *Æt.* 26.—1st Pregnancy.

Brought to Hospital at 6 A. M. 19th December, 1858, with the left arm of a fœtus born and a pulseless loop of funis protruding beside it.

In labor 20 hours; arm down 12 hours; no pains; pulse frequent strong; no restlessness or other unfavorable symptoms present.

Thorax deeply depressed into pelvic cavity, and protruded arm almost completely separated from trunk. Whilst making the examination, a quantity of dark blood flowed from the pubic side of the pelvis, but its source could not be ascertained.

The bladder being emptied by the Catheter, the Perforator was introduced into the axilla and the viscera removed. Delivery was accomplished with some difficulty owing to the body being impacted in the pelvis. After delivery the bleeding was observed to be rather free and the hand was introduced to remove the placenta, but none could be found in the uterine cavity. Further search led to the discovery of a large rent in the anterior part of vagina near its junction with the uterus.

Removed by friends in a dying state.

NO. 12.—PRETERNATURAL LABOR.

Sooboo *Æt* 40.—10th Pregnancy.

Brought to Hospital 3 P. M. 3rd June, 1859, with the right arm of a small fetus born, and the pelvic cavity completely filled up by the body. Labor commenced 19 hours previous to admission, and the arm came down two hours before leaving home for Hospital.

Uterine action very good, and expelled the body in a few minutes after admission, no aid whatever being required. The child was very small and born still, while the pelvis was a very capacious one; placenta thrown off immediately after the birth of the fetus; patient made an excellent recovery; and left Hospital on the 9th June.

NO. 13.—PRETERNATURAL LABOR.

Sunloo *Æt* 28.—4th Pregnancy.

Brought to the labor ward at 3 P. M. 22nd, stated to be in labor from morning. Os fully dilated; membranes entire and distended with Liquor Amnii, but the presentation could not be made out. Membranes were ruptured by the finger and presentation ascertained to be the left shoulder.

Turning was immediately performed without difficulty and the child extracted alive; placenta came away naturally; the uterus contracted well, and the mother made a good recovery, and left Hospital on the 3rd May, 1859.

COMPLEX LABOR.

TWIN CASES.

25 cases of twin labors were confined during the period under report or one in every 85½ of all labors; of the 50 children, five were born still, of which number one was a blighted ovum, occurring along with a full grown living fetus. 24 of the children were males and 26 females, nine of the cases were double cranial presentations, two double podalic—in ten the head and lower extremity presented, in one head and shoulder, in two others the presentation

of the 1st child was unrecorded, having been born prior to admission. The second child presenting by the head in one, and by the shoulder in the other instance.

The mode in which delivery was effected was natural in all the cases, except three, in two of which turning was had recourse to, on account of the presentation being a shoulder, and in the other the Forceps were employed, on account of puerperal convulsions appearing after the birth of the first child. All the women recovered except the one in whom convulsions appeared before the birth of the second child. This woman quite recovered from the convulsive seizure, and left her bed, but being attacked with double pneumonia, she died on the 18th day after delivery.

The ages and No. of Pregnancy of the twin cases are given in the following table, as also the mode of delivery, and the duration of labor.

Ages of Women.....	17	18	21	22	25	28	29	30	32	35	36
No. of Women.....	1	1	1	2	1	4	2	3	4	5	25
No. of Pregnancy.....	1	2	3	4	5	6	7	8			
No. of Women.....	4	2	2	5	4	4	3	1			25

No.	Sex of Children.		Chil. dren.		Presentation.		Pregnancy.		Age.	Mode of Delivery.
	1st Child.	2nd Child.	Alive.	Dead.	1st Child.	2nd Child.	Pregnancy.	Duration of Labor for hours.		
1	M.	F.	1	1	F.	F.	3	12	25	Nat.
2	F.	F.	2	0	H.	H.	4	7	23	Nat.
3	M.	M.	2	0	H.	H.	1	30	17	1 Nat. 1 Forceps.
4	M.	F.	2	0	H.	S.	5	3	32	1 Nat. 1 Version.
5	F.	F.	2	0	B.	F.	7	5	36	Nat.
6	M.	F.	2	0	H.	F.	4	21	30	Nat.
7	M.	F.	2	0	H.	F.	6	44	28	Nat.
8	F.	F.	2	0	H.	H.	2	24	22	Nat.
9	F.	F.	2	0	B.	H.	4	13	35	Nat.
10	M.	M.	2	0	H.	B.	3	74	32	Nat.
11	M.	F.	2	0	unknown.	H.	8	43	32	Nat.
12	M.	F.	2	0	H.	H.	2	9	22	Nat.
13	F.	F.	2	0	H.	H.	1	62	18	Nat.
14	F.	F.	2	0	H.	H.	6	10	28	Nat.
15	M.	M.	2	0	H.	H.	7	6	35	Nat.
16	M.	M.	0	2	H.	H.	5	9	30	Nat.
17	F.	F.	2	0	H.	H.	1	3	21	Nat.
18	M.	F.	1	1	H.	F.	1	15	30	Assisted.
19	M.	F.	2	1	H.	F.	6	5	28	Nat.
20	M.	M.	2	0	H.	K.	4	14	29	Nat.
21	M.	F.	2	0	F.	F.	4	5	29	Nat.
22	M.	M.	2	0	H.	F.	5	2	30	Nat.
23	M.	F.	1	1	unknown.	S.	7	23	32	1 Nat. 1 Version.
24	M.	F.	2	0	F.	H.	5	5	30	Nat.
25	M.	M.	2	0	B.	H.	6	12	35	Nat.

(To be concluded in our next.)

ART. VII.—*Practical Midwifery, as observed in the Lying-in-Hospital, Madras, from 1st January, 1857, to 30th June, 1859.* By J. L. PAUL, M.D., late Superintendent of the Hospital.—(Concluded from our last.)

#### CONVULSIONS.

EIGHTEEN cases of puerperal convulsions were treated during the period under report, or 0·84 per cent. of all labors.

This is a higher percentage of this dangerous complication than the statistics of parturition would lead us to expect, accounted for, no doubt, by the fact, that the practice in morbid parturition occurring in this institution is larger, considerably, than what the limited number of confinements occurring in the house alone would yield; many cases seeking relief, only on account of some deviation from the natural course of labor, and after its actual occurrence in most instances; while, if the labor had pursued its natural course, these cases would not have applied for advice at all. In two of the cases of convulsions under report, Nos. 14 and 15, the breech was the presenting part, which is most unusual, this complication being almost invariably associated with presentations of the head, so much so, that during the early years of Dr. Denman's practice, he had met with convulsions associated only with presentations of the head. The subject of one of these, No. 14, was an epileptic. Whether the circumstance of her being so had any influence in inducing the seizure during confinement, is very problematical; for, though obstetrical opinion at one time inclined towards considering the previous occurrence of epilepsy as a predisposing cause of puerperal convulsions, as indicated in the writings of Locock and others, yet, in the report of Drs. Hardy and McClintock, three or four epileptic females are instanced as passing through labor under their notice, without any attack of convulsions; while they add, that even the epileptic attacks occurred during pregnancy with less frequency and mitigated severity. A case in all respects similar occurred in this institution in 1857, excepting that there was no mitigation of the epileptic seizure during pregnancy. A woman in her first pregnancy, epileptic from the age of 10, was admitted in the 7th month on account of being subject to epileptic fits. She was kept under observation during the remainder of the term, and confined in the house: she had frequent attacks of the epileptic fits while under observation, but labor, which lasted 24 hours, was undisturbed by any epileptic seizure.

Of the 18 cases, 13 occurred in primipara, two of these being twin cases, while five occurred in 2nd, 3rd, 4th, and 7th pregnancies respectively. Six of the cases were above 21 years of age. These cases of convulsions do not bear out Collins' observation, that "con-

convulsions occur almost invariably in strong plethoric young women with their 1st children more especially such as are of a coarse make, with short thick necks ;" for five occurred in pregnancies other than the first ; six of them were over 21 years, while two of them had attained their 32nd year, and in none of the cases was the term strong or plethoric applicable. In nearly all, the convulsions were of the asthenic type, and in none was depletion with the lancet practised or admissible. The pulse is entered in most of the cases as "compressible," "feeble," "weak," "almost imperceptible," "frequent, not strong," and is never found to be more than "full."

In one of these cases, No. 10, no actual convulsions were witnessed, but the woman was brought into hospital in a state of insensibility ; her friends even denied the presence of convulsive action, though they admitted her having complained of severe headache early in the day, followed by insensibility during the progress of the labor. Labor was far advanced on admission and terminated without interference, within two hours thereafter ; but she continued insensible, and gradually sank, five hours after an easy confinement. In all probability the case was one of apoplectic convulsion, where the spasmodic action was not of long duration, and may have been overlooked. In another, No. 12, in which the fits were followed by long continued coma, the patient became sensible before the completion of labor, but died on the fourth day in a state of insensibility without any return of convulsions. In No. 11 a similar recovery from coma took place, and she was delivered by the powers of nature.

The treatment pursued in all the cases was pretty uniform, consisting of smart purgations by Calomel and Croton oil on admission, assisted by enemata ; the application of cold to the head, generally in the form of ice, as long as any heat of the scalp remained ; sinapisms to the lower extremities ; small doses of Tartarised Antimony, occasionally combined with opium, especially after delivery, as in cases Nos. 4 and 5, or, on restlessness being evinced even before delivery, after the force of the circulation had been abated by free purgation, and the use of Antimony, as in case No. 3. The uterus was emptied as soon as the Os was fully dilated, and the state of the parts admitted of delivery, in all the cases in which the presenting part did not continue to make progress. In one case only, No. 8, was delivery effected before the full dilatation of the Os was complete, and in that it was highly dilatable, and opposed no obstruction to the gentle force that was used to complete that process. In one case, No. 18, convulsions appeared after the birth of the child, and in another, No. 6, the woman died undelivered, in the 1st stage of labor, before the state of the Os permitted either version, the application of the forceps, or perforation. It is worthy, however, of remark, that in this case, although the passages were not sufficiently dilated to admit of artificial delivery, that there was apparently no necessity for it, as

sensibility was returning, and the patient had been 12 hours free from convulsive seizures before death, which occurred very suddenly without any premonitory symptom, or without any cause disclosing itself, sufficient to account for its sudden occurrence. Unfortunately no *post mortem* examination could be obtained.

No.	Age.	No. of Pregnancy.	Result to		Mode of Delivery.	Presentation.	Duration of Labor.
			Mother.	Child.			
122	4		Death.	Death.	Forceps.	Head.	15 hours.
220	1		Recovery.	do.	do.	do.	20 "
320	1		do.	do.	do.	do.	21 "
425	1		Death.	do.	do.	do.	3 days.
516	1		Recovery.	2 Alive.	1 Nat. 1 Forceps.	2 Heads.	30 hours.
632	1		do.	Alive.	Natural.	Head.	29 "
721	1		Died.	Undelivered.	—	do.	Unknown.
816	1		Recovery.	Alive.	Forceps.	do.	24 hours.
917	1		Death.	Death.	{ Version and } { Perforation. }	do.	17 "
1018	1		Recovery.	do.	Forceps.	do.	15 "
1121	2		Death.	do.	Nat.	do.	14 "
1216	1		Recovery.	2 Deaths.	do.	2 Heads.	13 "
1332	7		Death.	Alive.	Forceps.	do.	20 "
1420	1		Recovery.	Death.	Craniotomy.	do.	4 days.
1517	1		Death.	do.	Assisted.	Breech.	3 "
1626	4		do.	do.	do.	do.	15 hours.
1720	2		do.	do.	Natural.	Head.	2 "
1821	1		do.	Alive.	do.	do.	6 "

## No. 1.—CONVULSIONS.

Mahalutchmee *Æt.* 22.—4th Pregnancy.

Brought to hospital at 2½ p. m. 13th January, 1857, in a state of insensibility breathing stertorously; pulse frequent and small; skin hot. The Os fully dilated and the head of the fetus low in the pelvic cavity. Labor stated to have commenced about fourteen hours, and the membranes to have ruptured six hours before admission; convulsive action appeared after the rupture of the membranes. All her previous labors were said to have been attended with convulsions. Had Calomel gr. v., Ol. Croton grs. iij. on admission, and a stimulating enema, ice to the head, and a sinapism to the nape of the neck; and at 3½ p. m. she was delivered by the forceps of a male child, still. Her pulse now became very feeble, almost imperceptible, great insen-

sibility, no stertor nor convulsions. Carbonate of Ammonia *gr. x.* were given, which had the effect of slightly raising the pulse; the sinapism was repeated to the neck; ʒij. of brandy along with arrowroot were given every half hour, under which her pulse gradually rose. At 6 P. M. she became sick and vomited, the pulse becoming again almost imperceptible and the extremities cold. Sinapisms were applied over the epigastric region, with turpentine frictions, hot bottles to the extremities, and the stimulant was persevered in. She gradually rallied. 10 P. M. Pulse pretty good, but insensibility continues. Blister to nape of the neck. Continue stimulants and congee at longer intervals. Sensibility gradually returned.

On the 15th she was attacked with diarrhoea and complained of much uterine tenderness. By the 20th she was relieved of these symptoms, but began to sink and died on the 22d.

Body not examined.

#### No. 2.—CONVULSIONS.

Mungay *Æt. 20.*—1st Pregnancy.

Brought to hospital at 3 A. M. 2nd February, 1857, said to have been in labor since 10 A. M. of the 1st instant, the head well down in the pelvis, and the Liquor Amnii evacuated; labor pains strong. She was apparently going on favorably until 6 A. M., when she was seized with convulsions. A dose of Calomel and Croton oil was given as soon as she was able to swallow, and a purgative enema administered.

At 6¼ A. M. a second fit came on, and at 7½ A. M. a third. She was now delivered with forceps of a male child; the pulsations of its heart were very feeble and soon ceased.

No convulsions occurred after delivery. Recovered.

#### No. 3.—CONVULSIONS.

Vigium *Æt. 25.*—1st Pregnancy.

Brought to hospital at 2½ P. M. 28th February, 1857, in a state of insensibility, said to have suffered from convulsions for eight hours, and to have complained of severe headache, and fulness in the head for three hours previous to the seizure.

The pulse 120, and compressible, the skin hot, the os uteri only admitted of the introduction of the point of finger, and its margin felt tense and undilatable, the membranes seemed to have been ruptured, her bowels were said to be confined. A strong purgative Enema with Turpentine was administered and Calomel *gr. x. ol. Croton gtt. v.*, Ant. Pot. Tart. *gr. ʒ* in syrup, put on the tongue, sinapisms applied to the calves. The hair was removed and Ice applied to the head. By 4 P. M. the bowels had acted twice, and she had two more fits (epileptic form), but the Os uteri remained the same. Enema repeated, and sinapisms applied to the thighs. At 5¼ P. M. a third fit occurred, but no change in the state of Os. Delirium in the intervals of the convulsions, but there was neither stupor nor

stertorous breathing; skin cooler; the pulse continued much the same; the bowels were moved twice more; fetal heart audible.

At  $\frac{1}{4}$  to 6 P. M. she was ordered Ant. Pot. Tart. gr.  $\frac{1}{4}$  every quarter of an hour, and at  $\frac{1}{4}$  past 6 P. M. a fourth fit occurred, after which she evinced great restlessness. The Os uteri not being further dilated,  $\mathfrak{m}$  xx. of Liq. Opii sedativ were now added to the dose of Ant. Pot. Tart., and repeated in a quarter of an hour. Became easier after this, and had no return of convulsions; but as it was deemed advisable to keep her for a time under the influence of the opium, she had  $\mathfrak{m}$  v. Tinct. Opii added to each dose of Tartar Emetic till she took  $\mathfrak{m}$  xx. (making  $\mathfrak{z}$  i. in all.) The Ant. Pot. Tart. alone was subsequently continued till 11 P. M. There was no return of the convulsions, but no improvement whatever took place in the state of the Os.

1st March. Took Infus. Senna  $\mathfrak{z}$  ij., Mag. Sulph.  $\mathfrak{s}$  iv., Vini Ant. Tart.  $\mathfrak{s}$  i. and had the binder tightly applied. The purgative not having acted well an enema containing turpentine was administered in the afternoon.

6 P. M. The Os uteri found a little more dilated, but no sensible uterine contraction, and no return of convulsions has occurred; patient continued constantly moaning, and when roused answered questions incoherently. Pulse 140, weak and small. The Liquor Amnii of an offensive odour dribbled away all the evening; fetal heart not now audible. Ergot and Borax of each  $\mathfrak{z}$  ss. were given, and repeated in twenty minutes; uterine action came on, and at 10 $\frac{1}{2}$  P. M. the passages being fully dilated, but the head not advancing, she was delivered by forceps. Small quantities of brandy and arrowroot were given at short intervals. By 12 o'clock she had rallied, and the placenta being found within the Uterine cavity partially adherent, it was removed; no hæmorrhage followed, but she continued moaning as before, and now could not be roused. A blister was applied to the occiput and nape of the neck, the brandy and arrowroot were continued.

2nd March. Expired at 1 A. M.

A *post mortem* examination was not permitted by the friends.

#### No. 4.—CONVULSIONS.

Vullesamah Æt. 16.—1st Pregnancy.

A stout young woman, admitted in the first stage of labor, at 7 A. M. 30th March 1857.

Her bowels not being free, a dose of Castor oil was given on admission. She was purged and went on favorably till 3 $\frac{1}{2}$  A. M. of the following day, when the child was born, and it was discovered that the uterus contained another.

At 3 $\frac{1}{2}$  A. M. she was seized with a convulsion, the membranes of the 2nd fetus were immediately ruptured and delivery effected by the forceps.

At 6½ A. M. a second fit of convulsions coming on, her hair was removed, ice applied to the head, and sinapiams to the calves of the legs; the bladder was again emptied by the Catheter, and she took Tinct. Opii, ʒ ss. in Mist. Camph. ʒ i.

Convulsive fits recurred twice by 7½ A. M., the bowels were acted on by Calomel grs. vi., OL Croton gtt. iij. and a purgative enema.

At noon her extremities were cold, breathing stertorous, the convulsions frequent and severe, and a state of stupor remained in the intervals; she was much purged, the ice was now discontinued, and a blister applied over the occiput and nape of the neck. She also took Cal. gr. vi., Opii. gr. i every hour, till three doses were given and had the Ungt. Hydrorg. Fort. rubbed into the thighs.

*Vesper.* At 6 P. M. her skin had again become hot, the convulsions continued, but were not so frequent nor severe as in the forenoon, and the purging was less. The Calomel was now reduced to grs. ii. every hour, and at 9 P. M. ¼ of a grain of Tartarized Antimony was added to each dose for three doses, which had the effect of lowering the temperature of the skin. The convulsions did not return after 9½ P. M.

On the 1st April there was an evident improvement and signs of returning sensibility. In the evening she was quite sensible. Took arrowroot, complained of thirst, uterine tenderness, and soreness of mouth. Calomel omitted. R. Tinct. Opii ʒ ss. at bed time. She gradually recovered, but was subsequently attacked with pneumonia, and died of it on the 16th April.

No. 5.—CONVULSIONS.

Ponney *Æt.* 32.—1st Pregnancy.

This woman was admitted at 1 P. M. 25th May, 1857, said to have been in labor for several hours. She went on favorably till 9 P. M. when the head was born, and immediately after a fit of convulsions came on, which lasted a few minutes. The body was expelled during the convulsions, and in five minutes the placenta followed. The uterus contracted firmly, but on recovering from the convulsions, the woman called attention to the vulva, where she said there was much pain and a burning sensation. On examining the part, the sides of the vagina, the inner surface of the labia and perineum were found lacerated. An opiate draught containing Liqr. Opii Sedat. ℥ xx. was given, and a purgative enema administered.

At 9½ P. M. a second fit came on and lasted five minutes. An anodyne draught was given, containing Tinct. Opii ℥ xl, after which she fell asleep and had no return of convulsions.

She did well, and left hospital on the 4th June.

No. 6.—CONVULSIONS.

Mooneeah *Æt.* 21.—1st Pregnancy.

Brought to hospital at ¼ to 5 P. M. 31st May, 1857, in a state of insensibility said to have been seized with convulsions at 8 A. M., and

to have had frequent returns of the fits during the day. Her friends stated that she had been well, up to the time of seizure, except complaining of a slight headache on rising from bed at 6 o'clock that morning. On admission her pulse was full, skin hot, and breathing sonorous; the Os uteri dilated to the size of a half rupee, membranes unruptured, head presenting, the passages very hot and the fetal heart not heard. Calomel gr. x., Ol. Croton gtt. v. were put on her tongue, a strong purgative enema was given, her hair removed, ice applied to the head and sinapisms to the calves.

By 6 P. M. the bowels had acted copiously twice, the convulsions had returned only twice from the time of admission, the Os uteri remained unchanged; was ordered to take Ant. Pot. Tart. gr.  $\frac{1}{2}$  every quarter of an hour. 9 P. M. Pulse very frequent, skin cooler, no more convulsions, sensibility returning, Os uteri slightly more dilated and dilatable, passages still hot, but moist. Continue Ant. Pot. Tart.

*Midnight.* Os uteri dilated to about double its former size, the passages cooler and softer, no return of convulsions, and patient somewhat more sensible; the bowels have acted twice since 6 P. M. Ant. Pot. Tart. gr.  $\frac{1}{2}$  every half hour.

1st June. At 7 $\frac{1}{2}$  A. M. to-day she died suddenly without any apparent cause, without having any return of fits, fainting, diarrhoea, clammy skin, or sickness.

A *post mortem* examination not permitted.

#### No. 7.—CONVULSIONS.

##### Alamaloo $\text{\AA}$ t. 16.—1st Pregnancy.

Brought to hospital in a state of stupor at 4 $\frac{1}{2}$  P. M. 2nd August, 1857, said to have been attacked with convulsions just as labor pains set in at 8 A. M., and to have had repeated returns of the fits during the day; skin hot, pulse full and strong, bowels not moved for two days; Os uteri pretty well dilated, soft and dilatable, passages cool and moist, membranes unruptured, head presenting; fetal heart audible. The membranes were immediately broken and she had Calomel gr. v., Ol. Croton gtt. iij., put upon her tongue. A strong purgative enema was administered, sinapisms applied to the calves, the hair removed, and ice kept to the head. In an hour, there being no effect produced on the bowels, and convulsions continuing, a second purgative enema containing turpentine  $\frac{3}{4}$  ss. was administered.

By 6 $\frac{1}{2}$  P. M. the head had passed through the Os and began to descend, the forceps were now applied and a living child extracted.

After delivery the bowels began to act copiously and no more convulsions returned. She slept well, and was quite sensible next morning. She recovered.

#### No. 8.—CONVULSIONS.

##### Amoordum $\text{\AA}$ t. 17.—1st Pregnancy.

Brought to hospital at 5 A. M. 7th September, 1857, in a state of stupor, said to have been seized with convulsions at 7 P. M. of the

6th. The fits of convulsions came on at very short intervals, and were severe, the Os uteri the size of a half rupee but soft, passages moist, head hot, pulse frequent not strong, breathing stertorous at intervals. She took Calomel grs. vi., OL Croton gtt. iij. on admission, had a turpentine enema administered, sinapisms applied to the calves, &c.

By 7½ A. M. she had been twice purged, the convulsions were less severe and less frequent, Os uteri somewhat more dilated, but the insensibility continued. The sinapisms were repeated, and she was ordered to take Ant. Pot. Tart. gr. ʒ every quarter of an hour.

Noon. Well purged again, but has not vomited; skin cool, the heat of scalp quite removed, pulse small and weak, the convulsions continue, and the state of insensibility has increased to complete coma, the Os uteri much the same in size, but rather more dilatable. The antimony and ice were now discontinued, membranes ruptured by the hand, the Os uteri gently dilated by the fingers until it was of sufficient size to allow of the introduction of the hand, when the feet of the fetus were brought down, but with some difficulty, the pelvis being small; the passage of the head was attended with great difficulty and had to be effected with the aid of the perforator. Patient continuing to become weaker, small quantities of brandy and arrowroot were given at short intervals, and a blister applied to the nape of the neck and occiput; but she did not rally. Died at a ¼ to 2 P. M.

#### No. 9.—CONVULSIONS.

Yetty Æt. 18.—2nd Pregnancy.

Brought in at 9 A. M. 24th August, 1858, in the first stage of labor, said to have had a fit of convulsions. Os uteri nearly fully dilated, membranes entire and very tough. Soon after admission, a second fit coming on, the membranes were ruptured by the hand, and the head was found to present in the first position. It descended regularly; a dose of Calomel (grs. vi.) and Croton oil (gtts. ij.) was given, and in a few minutes the short forceps were applied, in order to terminate the labor. The child was born still, placenta expelled in ten minutes, and was followed by pretty smart hæmorrhage; the convulsions again returned at this time, and her skin became cold, and pulse weak. She had a draught containing Sulphuric Ether and Spts. Ammon. Aromat. āā ʒ ss. The bowels were acted on by a turpentine enema, and sinapisms applied to the calves and to the epigastric region.

From 10½ A. M. to 1 P. M. there were no convulsions, but she continued in a state of stupor. Sinapisms applied to the nape of the neck. At 2 P. M. a fit of convulsions came on, slight and of short duration; the bowels after this acted well and the stupor became less deep. The sinapisms were ordered to be reapplied to the calves, and an opiate draught to be given (Tinct. Opii. ʒ xl.)

6 P. M. No convulsions since last report, well purged, slept tran-

quilly, pulse frequent and soft, skin not hot, Hydr. Chlorid. grs. iij., Opii gr. i. ss. at bed time. 10 P. M. Convulsions have returned, but very slight in character and short in duration.

Repeat Calomel and Opium. Blister to nape of the neck.

25th. Three fits since last report, very slight and at intervals of two or three hours; pulse 110, small soft; blister rose well, sensibility returning. No medicine during the day. Repeat calomel and opium at night.

26th. Sensibility quite restored, no convulsions, abdomen distended with flatulence, slight tenderness in uterine region. Gradually regained strength and left the house on the 1st September well.

#### No. 10.—CONVULSIONS.

Amaraputhy *Æt.* 21.—2nd Pregnancy.

Brought to hospital at 2½ A. M., 3rd Sept., 1858, in a state of stupor. Her friends state she has been 19 hours in labor, but has had no convulsions, though she complained of severe headache in the early part of the day, and gradually thereafter became insensible. Os fully dilated, membranes ruptured, head presenting, uterine action good.

Calomel, grs. vi., Ol. Croton gtt. iij. Purgative enema.

In two hours after admission, the child was born still, without assistance, and the placenta came away in 20 minutes; but the stupor continued in spite of treatment, and she gradually sank.

#### No. 11.—CONVULSIONS.

Mooneamah *Æt.* 16.—1st Pregnancy.

Admitted 28th September, 1858. Brought to hospital in a state of complete insensibility, said to have been attacked with convulsions an hour before admission. Os uteri admitted one finger only, but was soft and dilatable; head presenting, fœtus alive, patient anasarcaous. She took Calomel grs. x., Ol. Croton gtt. vj.; had a purgative enema with turpentine, and sinapisms were applied to the calves.

By 10 A. M. she was freely purged, sensibility returning, no convulsions, skin cool, Os the same, Vin. Ant. Tart. ʒ i. every half hour. Noon. Vomited. Vin. Ant. Tart. to be given every 2nd hour.

5 P. M. Os uteri fully dilated, sensibility perfect, no convulsions, membranes just ruptured, pains good, child still born. A second fœtus presenting by the head, the membranes were ruptured by the hand—this child was also born still.

10 P. M. Restless, Tinct. Opii ʒ ss. Aqua ʒ i. mft. Haust. She recovered and left hospital on the 12th October 1858.

#### No. 12.—CONVULSIONS.

Rungamah *Æt.* 32.—7th Pregnancy.

Brought to hospital at 2¼ P. M. 21st November, 1858, said to have been seized with convulsions at 1 A. M. Complete coma on admission, stertorous breathing, labor only beginning, little or no uterine action.

Calomel grs. x., Ol. Croton gtt. vi., Enema purgans, & Ol. Terebinth. ʒ ij., sinapisms to calvea.

4 P. M. Purged three times after a second enema; pulse full and frequent, skin hot, other symptoms much the same, Os uteri in the same state. Ant. Pot. Tart. gr. 1-6th every quarter of an hour.

6 P. M. Slight symptoms of returning sensibility, pulse tranquil and soft, skin cool, not purged since 4 P. M. Omit Ant. Pot. Tart. Repeat sinapisms first to the thighs and afterwards to the neck. Calomel grs. x.

9½ P. M. Os uteri fully dilated, uterine action good, other symptoms as before. Considering her present state, the membranes were ruptured and the forceps applied; child born alive. The Os uteri contracted spasmodically as soon as the child was extracted, and therefore the placenta was immediately removed by the hand.

22nd. Respiration tranquil, no stupor, pulse small and soft, but fuller than after delivery, skin cool, feels when pinched. Bowels moved once this morning.

Arrowroot and brandy in small quantities occasionally.

Noon: Skin hot, pulse full, more insensible, has taken only one dessert spoonful of brandy, bowels open.

Calomel gr. i., Ant. Pot. Tart. gr. 1-6th every 2nd hour. Blister to the nape of the neck.

23rd the same. Dress Blister with Uagt. Hydrarg. Cont. Cal. and Antim.

*Vespere.* The same.

24th November, 6 P. M. Is very low, pulse feeble, skin cold, insensibility profound, brandy ʒ ij. with arrowroot oongee every hour.

25th. Died. A *post mortem* examination not permitted.

No. 13.—CONVULSIONS.

Vulleamah *Æt.* 20.—1st Pregnancy.

29th November 1858. Brought to hospital at 9 A. M. in a state of partial insensibility, said to have been four days in labor, and to have suffered from convulsions 13 hours. Os uteri fully dilated, head in the pelvis, pains good, bladder distended, bowels said to be costive. Bladder relieved by Catheter with much difficulty. Calomel grs. vi., Ol. Croton gtt. ij. Purgative enema.

3 P. M. No return of convulsions; not purged, the enema was repeated, but did not pass up on account of the pressure of the head against rectum, fetal heart audible. Forceps applied, but the most powerful traction failed to bring down the head. After persevering for an hour the instruments were withdrawn, and the head perforated.

Two doses of ergot were then given, at an interval of half an hour, but the uterine action induced by them was still very inefficient. In a quarter of an hour after the birth of the fetus, the placenta had to be taken away on account of hæmorrhage, a good and firm contraction then ensued, and as she was very weak, some brandy and arrowroot were given, and at 9 P. M. an opiate draught.

30th. More sensible, slept well, continue arrowroot without brandy.

1st December, 6 P. M. Appears to have some tenderness, skin hot, pulse full, sensibility returning. Hydrarg. Chlorid. grā iij. Pulv. Antim. Co. grā iij. Opii. gr. i. at bed time. Fomentation to abdomen.

2nd. Pulse 98, skin slightly hot, slept well, quite sensible, no headache, slight abdominal tenderness. Continue fomentation. Ol. Ricini § j.

3rd. Doing well. Continue fomentation.

7th. Discharged well.

#### No. 14.—CONVULSIONS.

Moonah Bahee *Æt.* 17.—1st Pregnancy.

Brought to hospital at 11 A. M. 18th December, 1858, in a state of insensibility, said to have been three days in labor, and to have suffered from convulsions the whole time; has been subject to epileptic seizures from childhood.

On admission her pulse was weak and small, skin not above natural temperature, respiration irregular, and stertorous at intervals. The Os uteri was fully dilated, the breech presenting, with its transverse diameter, corresponding to the anteroposterior diameter of the pelvic cavity, and a coil of the funis encircling the thigh; the passages were well dilated, moist and cool; the fetus alive, and uterine action good.

By a little manipulation the position of the breech was altered, and it immediately began to descend. She took also Calomel grā. vj., Ol. Croton grā. ij., and a purgative enema.

Up to this time she had had three fits at intervals of fifteen minutes, and then followed a long interval without convulsions, during which the labor progressed slowly but steadily, and she gradually became sensible again.

At 2 P. M. a violent convulsion suddenly seized her, and on its subsidence she began to get evidently weaker, her pulse was scarcely perceptible, skin clammy, respiration laboured and attended with a loud mucous rale. The delivery was now hastened by inserting a finger into the groin, and bringing down the breech; but ere the head was born she expired.

The child was still-born, and attempts to resuscitate it failed.

#### No. 15.—CONVULSIONS.

Rungamah *Æt.* 26.—4th Pregnancy.

Admitted at 8½ A. M. 19th January, 1859, in a state of complete insensibility, with sonorous, and at intervals, stertorous breathing. No account of her seizure or history of the case can be obtained. Apparently not more than 7 months pregnant. Os admits only one finger, pulse weak, skin natural, eyes fixed, lower extremities slightly œdematous, with involuntary startings of the muscles.

Purgative Enema. Sinapisms to calves and nape of neck.

As no convulsive fits came on, and the enema had not acted, an enemata of zinc was given at 11 A. M. It relieved her of a large quantity of indigested food. Blister to nape of neck.

At 2 P. M. the Os was found fully dilated, membranes entire, and the breech presenting, delivery was assisted by the hand, but the child was born still. Patient continued insensible all evening.

20th. No improvement, and has become very feeble with cold extremities. ʒ i. of brandy in arrowroot every half hour. Hot bottles to extremities.

By 3 P. M. some reaction had taken place, pulse full and slow, eyes suffused, great insensibility, blister discharging. Calomel grs. ij. every hour. Died at  $\frac{1}{2}$  past 5 P. M. No post mortem obtained.

No. 16.—CONVULSIONS.

Chowry Æt. 22.—1st Pregnancy.

Confined 27th April, 1859, of a living child in a natural and easy labor of six hours' duration. Was seized at midnight with convulsions, which for the time were removed by dashing cold water on her face, and patient fell asleep.

28th. At 6 A. M. was seized with an epileptic convulsion which only lasted a few minutes, but returned after a quarter of an hour; patient being in the interval quite sensible. Hydi. Chlorid. grs. v. Pulv Jalap ʒi. Ol. Croton. gutt. iii. were given, as also an enema, and sinapisms applied to legs.

Noon. Vomited some indigested food; bowels moved three times by the purgative which was repeated; five fits within the last two hours; now insensible in intervals, skin hot, especially scalp.

Calomel gr. i. Tart. Anti. gr. 1-6th every hour.

Repeat enema, ice to head.

Vespere. Several fits since last report, purged freely, skin cooler, pulse softer, insensible, breathing stertorous. Blister to nape of neck. Continue Cal. and Tart. Ant.

29th. Slept pretty well, no fits from 10 P. M. till 3 A. M., blister rose, sensibility returning, skin cool, pulse soft. Omit. Cal. and Ant.

Tinct. Opii. ʒ xx.

Easy till 5 P. M. when she became restless, bowels not open.

Repeat Tinct. Opii., and again at bed time, purgative enema.

30th. Pretty easy, is regaining her senses, slept, bowels moved freely. No medicine.

Vespere. Restlessness returned at noon, some tenderness over uterine region, is delirious with spasmodic twitchings of face. Turpentine stupe to abdomen, shave head and apply blister to scalp, repeat anodyne draught.

Is not conscious of what is said to her, occasionally talks incoherently, skin still hot, blister rose well, pulse frequent soft, slept indifferently. Cal. gr. i. P. Ant. Co. gr. ij. every hour.

§ i. Ungt. Hydrarg. rubbed into thighs and axilla.

1 A. M. May 1st No improvement, abdomen tympanitic and still tender on pressure, bowels moved by enema. Cont. Cal. and Ant.

Vespere. Same. Cont. Cal. and Antim. Repeat Ungt. Hydrarg.

2nd Died at 6 A. M.

*Post mortem*.—Vessels of the brain not more turgid than usually met with. Ventricles and Subarachnoid spaces contained no more than the natural quantity of serum. Cerebellum had a healthy appearance, except a small portion of its left lobe, which was considerably softer than natural. Cerebrum generally presented a healthy appearance, but points here and there were considerably less firm than is natural and also than the rest of the cerebral structure.

#### HÆMORRHAGE.

*Hæmorrhage before delivery* includes cases of accidental and unavoidable hæmorrhage; seven of the former and six of the latter occurred. Another case was admitted reported to have had hæmorrhage for four days, but whether of the accidental or unavoidable form was not ascertained, as the patient was in a dying state when admitted, and no bleeding occurred after she was brought to the hospital.

Three of the cases of accidental hæmorrhage died; one undelivered, and two from internal bleeding having taken place to a very large extent before admission.

The case that died undelivered (No. 1.) was admitted in a very weakly state from loss of blood, hæmorrhage having continued during a period of seven hours before admission. Notwithstanding the excessive loss that had taken place, the Os was undilated, not admitting more than the point of the finger, and continued undilatable till she died. The usual practice for the arrest of accidental hæmorrhage could not in this case be applied, as the membranes could not be felt from not being filled, and the Os being at the same time so little dilated that the finger could not be introduced within it. There was, however, no bleeding on admission, and none for three hours after, during which time she had stimulants and nourishment. Pains re-appeared at the end of three hours, and with them hæmorrhage. The membranes were ruptured to allow the uterine fibres to come into closer approximation with the placenta, and to compress it while ergot was given to induce uterine contraction, but without success in saving the patient's life. The form in which the bleeding had taken place was somewhat unusual. A *post mortem* examination disclosed a large clot between the placenta and uterine walls, the margin of the placenta being adherent to the uterus, while its centre was detached for about half its surface. A similar condition was also found in No. 2 on removing the placenta.

Of the cases of unavoidable hæmorrhage, two were complete, Nos. 1 and 2, and four were partial.

In one, No. 1, the placenta, on admission, was found considerably

detached, and there was reason to suspect the death of the fetus. As the patient was extremely feeble, with hurried respiration, and hæmorrhage had ceased, she was simply watched and nourished till reaction set in, when the placenta was expelled; but craniotomy was performed to facilitate delivery as the cavities were emphysematous.

In the other, while attempting to extract the placenta, it gave way, and through the rent in it, the fetus passed and was speedily expelled by uterine action, the mother making a rapid recovery, and losing little or no blood.

Among the partial presentations of the placenta one occurred in a premature delivery in which the shoulder presented, and was born by spontaneous expulsion; there was no hæmorrhage on admission, and the body of the fetus which was dead, kept up so much pressure on the placenta, that no hæmorrhage occurred in its transit through the pelvis. In another, rupture of the membranes arrested the bleeding. In a third, which was a footling the placenta detached itself previous to the birth of the child, and the hæmorrhage ceased. The fourth was a shoulder presentation, version was performed in consequence, and the mother did well.

#### NO. 1.—ACCIDENTAL HÆMORRHAGE.

Lutchee *Æt.* 33.—8th Pregnancy.

Brought to hospital at  $\frac{1}{2}$  to 7 A. M. 19th June, 1857, said to be in the 8th month, to have been in labor seven hours and to have lost blood since the commencement of labor. Os the size of a quarter of a rupee, membranes could not be felt, no pains, bleeding slight, pulse weak, skin warm. A binder applied and some arrowroot given. At  $\frac{1}{2}$  to 10 Liqr. Amnii had accumulated between the head and membranes, and the hæmorrhage increased, pains very feeble, and Os very little more dilated. Membranes were ruptured and the waters allowed to escape; the binder tightened and  $\frac{3}{4}$  ss. of ergot in an ounce of brandy, besides small quantities of arrowroot given.

There was no great discharge of blood, but she continued to sink rapidly, and died at 11 A. M.

On *post mortem* examination, about half the placenta was found separated from its detachments, and a large clot occupying the space between it and the uterus.

#### NO. 2.—ACCIDENTAL HÆMORRHAGE.

Alamaloo *Æt.* 40.—7th Pregnancy.

Admitted at 5 P. M. 6th January, 1858, said to have been in labor for two hours. Os uteri the size of a rupee, membranes ruptured, head presenting, pulse very weak, extremities cold, pains absent, no external hæmorrhage, fetal heart not audible. She took brandy and arrowroot repeatedly, and by 7 $\frac{1}{2}$  P. M. seemed to have revived. The passages being fully dilated the forceps were then applied without difficulty and the fetus extracted still; there was no rupture detected

either in the vagina or uterus, but the contraction of the uterus was not satisfactory for a considerable time. Ergot and brandy were repeatedly given, and as hæmorrhage now began to take place the hand was introduced, the placenta detached, and a large coagulum removed from between it and the uterus. The cold douche was assiduously used, and the uterus kneaded with the hand, whilst pressure was at the same time kept up on the abdominal aorta, the hæmorrhage ceased; but she continued to sink notwithstanding the constant use of brandy and arrowroot, and died at  $8\frac{1}{2}$  P.M.

No. 3.—ACCIDENTAL HÆMORRHAGE.

Naigum *Æt.* 38.—9th Pregnancy.

Admitted at 1 A. M. 23rd February, 1858, said to have been three days in labor, and to have had hæmorrhage from 7 P. M. of the 22nd. Patient extremely weak, pulse small, feeble and rapid, skin cold, but is not restless, no hæmorrhage at the time of admission, uterine action very slight. Os uteri dilated the size of a rupee, soft and dilatable, membranes entire, placenta could not be felt by the finger, the passages cool and moist, fetal heart not audible, head presenting. The membranes were at once ruptured and  $\mathfrak{z}$ i. of Ergot with  $\mathfrak{z}$  i. of Port wine given every quarter of an hour till she took three doses. A Binder was also applied.

An hour after admission her skin had become warmer, the pulse firmer, uterine action more powerful, and there was no return of bleeding. The Os uteri was a little more dilated. The rectum being found loaded with scybala, a small enema of Caster oil and cold water was administered.

At 3 A. M. She was found seated up in bed, contrary to express orders, and to have removed the binder unobserved by the nurse; she had now become restless. As the Os uteri was fully dilated and the head descending, ergot  $\mathfrak{z}$  ss with brandy  $\mathfrak{z}$  i. was given immediately, the binder reapplied and delivery effected by the forceps. The child was born still. She began to sink rapidly, the placenta was removed, and efforts made to bring on firm contraction of the uterus, but without success; the cavity of the uterus was found filled with coagula, amounting to a very large quantity.

Died at  $3\frac{1}{2}$  A. M.

No. 1.—UNAVOIDABLE HÆMORRHAGE.

Abasece Bec, *Æt.* 23.—5th Pregnancy.

Brought to hospital at 8 A. M. 29th April, 1857, in an extremely weak state, said to have been six days in labour with profuse hæmorrhage, during the first five of these. No uterine action at the time of admission, pulse feeble and frequent, respiration 36, skin hot and dry; Os uteri the size of a crown piece, and the placenta completely over it, but detached to a considerable extent; passages cool, discharge sero-sanguineous and scanty; pulsations of fetal heart not

audible. Took ergot ʒ ss. brandy ʒ i. twice, and had a binder applied; small quantities of arrowroot were also given at intervals. At 3 p. m. uterine action returned, but without hæmorrhage. Discharge from vagina very offensive. Placenta being now detached, was pushed into the vagina, and removed, and the head found presenting, the membranes having been already ruptured.

The child being found to be putrid, and its thorax distended with gaseous emanations, the cavities were lessened by the perforator and delivery accomplished; after which the uterus contracted firmly, but the patient remained in a low state, till she was removed by her friends 24 hours after delivery. It was reported she recovered slowly.

**No. 2.—UNAVOIDABLE HÆMORRHAGE**

**Kabagoo Æt. 21.—3rd Pregnancy.**

Admitted at 7½ a. m. of the 10th January, 1859, much exhausted, and stating that she had had hæmorrhage from daybreak when labor pains began.

The Os uteri was found dilated to double the size of a rupee, and the placenta implanted completely over it; there was little or no bleeding on admission, and the pains were slight.

Arrowroot and brandy.

An hour after admission the Os was found pretty well dilated, still little or no bleeding, had occurred, and as far as the finger could reach all round the placenta was unattached. Her pulse had improved, and the pains were returning. The extraction of the placenta was now attempted, but a portion of it gave way, and the head passed immediately into the opening. A few good pains which succeeded this, completed the delivery without further assistance. The fetus was of course still-born. The uterus contracted firmly. She took a dose of ergot with brandy and did well. Left hospital on the 14th January 1859.

**No. 3.—UNAVOIDABLE HÆMORRHAGE**

**Kanagho Æt. 16.—1st Pregnancy.**

Admitted at 6 p. m. 23rd October, 1857, said to have been 23 hours in labor; the pains slight on admission, and the patient appeared very weak.

On examination the Os uteri was found well dilated, and about ⅓rd of it covered with placenta, with the right shoulder of a small fetus, which was evidently dead, presenting.

On enquiry it was now ascertained that there had been a good deal of hæmorrhage at the commencement of labor, but none for six or eight hours immediately before admission. A binder was put on and she took ʒ i. of brandy with ʒ ss. of ergot; the pains quickly returned, and the fetus was expelled by the breech; the placenta soon followed, and a good uterine contraction took place.

**RUPTURED UTERUS AND VAGINA.**

Eleven cases of rupture of the uterus or vagina occurred during

the period of my superintendence. Of all the accidents that can befall the parturient woman, this is the most hopeless; in none was either the mother or child saved; indeed the records of recovery from this dreadful lesion are exceedingly limited in the annals of Medical literature. The symptoms that indicate rupture are in general strongly marked, if the case has been under observation from the commencement of labor. These cases were admitted with great prostration of strength, failing action of the uterus, and general abdominal tenderness; in one case only was any external issue of blood remarked. In eight of the cases the lesion had taken place before the patients were brought to hospital, and they were delivered principally on account of their extreme prostration, as the very imperfect histories obtained were too vague to permit more than a suspicion of such an accident having occurred. Had they been under judicious management from the commencement of labor, it is more than probable that the lesion might have been averted in several. Two of the presentations only were such as necessarily called for interference, eight being presentations of the vertex, and one of the breech. In the majority of the cases, the duration of the labor could not be ascertained; in two it was under 12 hours, in one under 17, in one 49 hours, and in one of the shoulder presentations 100 hours. Six of the children were males, and the pregnancies varied from the 2nd to the 11th.

The fruitless action of the uterus, in its endeavours to expel a large hydrocephalic head, was the cause in one of the cases, neglected cross births in two instances (both cases given under *Pretermatural Labor*.) Inflammation of the uterus from long continued and tedious labor appears to have been the only assignable cause in the others. In all delivery was effected as speedily as possible, the placenta taken away, and firm contraction of the uterus established after the replacement of protruded intestines, where such occurred. In several of the cases, in which the rupture took place through the vaginal wall, the body of the child with the placenta escaped into the abdominal cavity; and in one instance in which it did so, the uterus contracted firmly while the head remained in the pelvic cavity and the presenting part.

Delivery was effected by the forceps in three cases, by bringing down the feet in three (one of these being a breech), and by the crotchet in four, and in one by natural means.

The ages of the patients and number of the pregnancy are shewn in the following tables.

Age of Patients	-	-	-	-	21	26	27	30	32	35	36	38
No. of Patients-	-	-	-	-	1	1	1	1	2	1	3	1
No. of Pregnancy	-	-	-	-	2	6	3	0	4	11	15	9
No. of Women	-	-	-	-	1	2	1	0	2	1	3	1

Three of these cases only have been given in detail as they pre-

sent peculiarities not usually met with. One, because she lived seven days after the accident; another, because the uterus continued to act after rupture, a third because the rupture was confined to the peritoneal covering and surface of the uterus.

No. 1.—RUPTURE OF VAGINA.

Oonamally *Æt.* 35.—5th Pregnancy.

Admitted at 7½ A. M. of the 23rd April, 1859, in the first stage of labor, membranes unruptured. She progressed favorably to the completion of the 1st stage. At noon, when the membranes ruptured, the pains which prior to this had been good, now gradually decreased in severity. Between 4 and 6 P. M. there were only slight pains; she complained of some difficulty of breathing, but there were no symptoms calling for interference; the head was felt in the pelvis at 4, but could not be felt at 6 P. M.

The anterior wall of the vagina was then found ruptured, the uterus contracted and empty, and the fœtus in the abdominal cavity. Immediate delivery was had recourse to by bringing down the feet. The head being delayed, it had to be perforated through the roof of the mouth. After delivery she took Tinct. Opii. ʒ i.

At 9 P. M. she was quite easy pulse 88, no pain complained of except on pressure in hypogastric region. The draught was repeated at 11 P. M. and at 5 A. M. next day.

On the 24th April she continued quite quiet, pulse tranquil, skin not hot, she slept, and had pain only on pressure. In the evening the pulse was 120, skin hot, tenderness increased. R—Calomel gr. v., Pulv. Ant. Co. grs. iij., Opii grs. ij., Mft. pil. ij. at bed time.

On the 25th the pulse was 124, skin cooler, tenderness still increasing, abdomen tympanitic but not much distended, soft. R—Hydr. Chlorid. Pulv. Ant. Co. ʒā. grs. iij., Opii. gr. i. were given every 3rd hour.

On the 28th April she was evidently much worse, her skin was cold and clammy, respiration hurried, there was scarcely any pulse at the wrist, tenderness of abdomen extreme, no sleep, restlessness, unable to pass urine without assistance of catheter. She had wine and nourishment but died at 4 P. M. of the 30th April.

A *post mortem* examination not obtained.

No. 2.—RUPTURED UTERUS.

Caroline *Æt.* 29.—7th Pregnancy.

Brought to hospital at 1½ P. M. of the 19th April, 1859, said to have been four days in labor, the pains exceedingly severe, the patient very restless, the Os uteri well dilated, and right shoulder presenting in the dorso-posterior position. There was some hæmorrhage which she said began the day before; pulse was firm but frequent; skin cold and moist; signs of fœtal life not satisfactory.

She took Tinct. Opii. ʒ i. which was repeated at  $\frac{1}{2}$  past 2 P. M. At 3 P. M. the pains were somewhat lessened in severity. She was then put under the full influence of chloroform and delivered by version without difficulty; the child was still-born the cuticle commencing to peel off.

She had ʒ ss. of ergot after delivery and the placenta was thrown off in a few minutes. A vaginal examination was now made on account of the large size of the uterus, but nothing detected. A good uterine contraction followed. There was no hæmorrhage, but severe pain in uterus was complained of whenever it was touched.

At 6 P. M. she was not restless but had not slept; there was no hæmorrhage, but she continued to feel severe pain in the region of the uterus. The anodyne draught was repeated at 9 P. M.

At 10 P. M. her pulse was weak, skin hot, pain acute. She had no sleep, moaning occasionally, crepitation felt above left pubis.

She spent a restless night; gradually became cold and pulseless, and died at 5 A. M. of the 2nd April.

*Post mortem examination.*

The areolar tissue in the neighbourhood of the uterus and that of the anterior portion of abdominal parietes was infiltrated with blood; peritoneal covering of uterus unbroken but separated from the viscus to some extent on the left side, by infiltration of blood; on laying open this, a rupture was disclosed in the left side of the uterus, running from the Os obliquely upwards, towards its anterior wall, to the extent of about  $3\frac{1}{2}$  inches.

No. 3.—RUPTURE OF UTERUS.

Koontheemah Æt. 36—4th Pregnancy.

Brought to hospital at 7 P. M. 11th May, 1859, said to have been in labor three days; abdomen pendulous, and uterus oblique, uterine action very slight, but she complained of tenderness across the hypogastric region. There was an indistinct feeling of fluctuation in the left iliac region which was supposed to be the distended bladder, but on passing the catheter no urine came away. Os almost fully dilated, passages cool and moist; head presenting; fetal heart not audible, mother's pulse weak, and her skin cold. There was no hæmorrhage from the vagina.

A binder was put on, and as the uterine action was not sensibly increased, she was ordered Tinct. Cannabis  $\mathfrak{m}$  x. every  $\frac{1}{2}$  hour for six doses. Her pulse improved, skin became warmer, and uterine action returned; she went on favorably, but made slow progress till five next morning, when the pains ceased, and patient began to get cold again.

The pulse failing, and restlessness setting in at the same time, brandy and arrowroot were then given in small quantities frequently without effect, and the forceps applied. In doing so the head was found to recede. She continued to get weaker, and was evi-

dently sinking very fast, so that immediate delivery was imperative. The perforator was introduced, and after the discharge of the contents of the cranium, a foetus of very large size was removed after continued and steady traction by means of the crotchet, and craniotomy forceps. The placenta was removed by the hand but the uterus remained uncontracted. The hand in the cavity of the uterus was now used to explore that viscus, but not the slightest trace of a rupture could be discovered either in it or vagina.

Patient sank soon after delivery, and after a time the abdomen was laid open, when a large rupture of the neck of the uterus was discovered extending transversely through the *peritoneal* covering and outermost portion of the substance of the organ, only, leaving the internal surface intact. Some serous effusion tinged with blood was found in the peritoneal cavity, infiltration of blood into the areolar tissue of the neighbouring parts and a coagulum of about four ounces in weight lying loosely in the abdomen.

#### OBSTETRIC OPERATIONS.

Under this head are collected all cases of operative Midwifery that occurred during the period under report. Many of them have been already detailed in other parts of this report; for instance some of the forceps cases have appeared under difficult, and others under complex labors. Here they are collected together and considered as operations irrespective of the causes demanding operative interference, though when the cases have appeared in detail under other sections they have been simply referred to here.

59 forceps cases occurred, 29 perforations of the head, 6 perforation of the thorax, 26 turning.

*Forceps cases.* 59 deliveries were effected by the forceps, or in the ratio of about one in every 36 cases. Of these, however, the greater proportion were brought into hospital, requiring instrumental interference, many of them having been days in labor. The percentages of forceps cases to deliveries appears very large, particularly if compared with the reports of the Dublin Lying-in-Hospital, where the operation was had recourse to, in one in every 617 cases by one report, and in one in every 165 cases by another: but, as stated under the head of Convulsions, the Madras Lying-in-Hospital presents a much larger proportion of morbid labor than the number of confinements occurring in the house should yield, from many cases seeking assistance in the hospital after the occurrence of deviations from the natural course of labor, which, if the labor had pursued its natural course, would have been confined at home.

All forceps cases under report were, with the exception of eight, brought into the house after labor had lasted many hours, and in some instances several days, on account of some severe complication. Although I fully believe that the "mortality attendant upon parturition increases in a ratio progressive with the increased duration of

labor, notwithstanding the older and, perhaps, still more generally received opinion, that mere length has no influence on its result, and is no test of its danger as enunciated by Collins, still in none of the cases reported above was the forceps employed on account of the duration of the labor simply. Symptoms of exhaustion of the uterus or system, a rapidly and steadily rising pulse, the skin becoming hot, a hot and dry state of the passages, and other symptoms indicative of local or general inflammation, or the fetal heart becoming feeble and irregular in its pulsations, were the immediate causes of their being employed. Had, however, these very cases been under observation from the commencement of labor, the extreme protraction of labor would have induced me to use the forceps even earlier than was the case, but as above stated eight only were in the house from the beginning of labor.

The very success that has attended the use of the forceps in these cases, proves that their employment was not inappropriate; for though 9 of the 59 forceps cases died, undoubtedly a large proportion,—eight of these deaths, occurred from serious complications unconnected with the forceps, and on account of which they were employed, viz., two from accidental hæmorrhage, three from ruptured uterus, three from convulsions. One of the fatal cases only comes properly under the denomination of a "forceps case;" while, had their use been longer delayed, there is every reason to conclude, that the result would have been different in the 50 recoveries that took place.

In the fatal case which was alone uncomplicated, the labor had lasted 58 hours, before the forceps were employed, of which time, 51 hours were occupied by the 1st stage (having become tedious apparently from premature rupture of the membranes); the 2nd stage being permitted to extend over seven hours only before the forceps were had recourse to, and during that period labor appeared to progress slowly.

Viewing, however, the deaths as they occurred under this head, (though actually from these complications as above stated) it is curious to remark that five-eighths of them occurred in women who had been upwards of 40 hours in labor, and bears out the conclusion come to by a celebrated living obstetrical authority in reviewing Collins's tables, that one in every six mothers perish who have been upwards of 36 hours in labor. It may be advanced that these returns include ruptured uterus, and other causes of death which might be called accidental, yet, had the forceps been used early in these cases, we have a right to conclude, that there is a probability that the accident would not have occurred.

It is proper here to remark that the forceps was used in one case who had been in labor only 17 hours, and whose state presented no symptoms calling for instrumental aid beyond the circumstance of the case threatening to prove tedious in the 2nd stage; and this I was anxious to prevent, as in her former confinement, which took

place up-country, the anterior wall of the vagina had given way and a vesico-vaginal fistula became established, which, I was fortunate enough to succeed in closing by wire sutures. I was unwilling that the cicatrix should undergo any undue pressure by the head resting long on it, so applied the forceps which had the desired effect of averting the dreaded injury.

The causes of the forceps being employed in these 59 cases were as follows:—

Puerperal Convulsions.	9
Ruptured Uterus or Vagina.	3
Accidental Hæmorrhage.	3
Tedious and difficult Labor.	43
To avert Pressure.	1

59

Of the 59 forceps cases, thirty two children were lost; of these 32 still born children, 23 occurred in women who had been upwards of 40 hours in labor, shewing clearly that the duration of labor has a most serious influence on the life of the child.

Below is given a table showing the duration of labor with the result to mother and child.

Hours in Labor...	41	15	16	17	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	Total				
No. of Women....	1	2	2	1	2	2	1	2	2	3	1	2	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	59	
Women died.....	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Children died....	0	2	1	1	0	1	1	0	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	32

Of the 32 still born children, 26 were males, shewing further the influence of the larger sized male head in causing the death of the child, during its transit through the pelvic cavity.

#### CRANIOTOMY.

The head was perforated 29 times during the 2½ years or once in 73½ labors, or in 1·4 per cent. of all labors, and below a table is given shewing the duration of labor in each case before the operation was had recourse to.

No. of Hours....	8	9	12	18	19	20	27	51	72	87	96	15	32	Said to be 15 days in labor.	Total.
No. of Women..	1	0	1	8	1	2	1	1	8	0	5	1	*	1	29
Women died.....	0	0	0	0	1	0	0	0	1	0	0	0	*	0	2

The causes of the perforator being used are shewn below.

Local inflammation and exhaustion of uterus	17
Rigidity of passages	1
Disproportion between head and pelvis, viz:—	
Narrow pelvis	4
" (with convulsions)	1
Large ossified head	1
Hydrocephalic head	2

Malposition of head - - - - -	1
Ruptured uterus - - - - -	2

Of the two fatal cases one was brought to hospital in a highly exhausted condition with cold skin and sunken eyes, and a pulse scarcely perceptible, having had an attack of cholera three days before admission. Although the uterus contracted well after being emptied of its contents, she never rallied. The other case was one of ruptured uterus, which lesion had occurred before admission.

#### *Evisceration.*

The thorax and abdomen were opened by the perforator and their contents eviscerated in nine cases. Two of these were vertex presentations, the head born, and in one torn off along with an arm before admission into the house. The third was a shoulder presentation in which the child died before turning could be performed, owing to extreme delay in the dilation of the Os, combined with premature rupture of the membranes. The case which is an interesting one is given in detail under Pretermatural Labor. Order II. Case No. 5. Six others were arm presentations too deeply embraced in the pelvic cavity to be returned into the uterus and version effected. In all there existed evidence of the death of the fetus, and in one, rupture of the uterus coexisted.

#### *Turning.*

Cephalic turning was had recourse to once, and podalic, twenty-two times for cross births, and for other causes as assigned below.

Presentation of shoulder and arm - - - - -	19
Compound presentation of head, hand, and foot - - - - -	1
On account of ruptured uterus and vagina - - - - -	2
On account of puerperal convulsions - - - - -	1

The results to mothers and children are shewn below.

Mothers recovered.	Mothers died.	Children alive.	Children died.
19	4	12	11

Three of the four deaths of mothers cannot be properly attributed to the operation, indeed in all propriety they might be removed from this section and transferred to complex labor, where they have been already shewn. They are inserted here to shew the circumstances under which the operation has been had recourse to; casting these three cases of ruptured uterus and convulsions aside, the operation, so far as the mothers are concerned, is most favourable; all the cases with the exception of one having recovered.

In the three complex cases above referred to, the children were born still, and lost in seven others, making a large percentage of infantile mortality, viz., nearly one half; but several of them had been mis-managed outside, one in fact had its clavicle and arm broken before the operation was undertaken.

#### *Fatal Cases.*

The following Table shews all the deaths that took place in the

hospital during the period I had the honor of being its Superintendent, with the causes assigned.

Rupture of uterus and vaginæ.	11
Puerperal convulsions.	10
Accidental hæmorrhage.	3
Exhaustion from tedious labor.	2
Dysentery and diarrhœa.	5
Disease of the heart and lungs.	3
,,    ,, stomach and bowels.	1
Dropsy	1
Peritonitis (non-puerperal)	1
Cholera	1
Remittent fever	1

Thirteen cases will be seen from the above table to have died from non-puerperal causes. The five deaths from dysentery and diarrhœa were brought into the house suffering long from that disease, and much exhausted by it. In four of them labour came on within a very few hours after admission, and in all was easy, natural, and of short duration. Two of them tho' able to take nourishment and support, during the short time that they were in hospital, never rallied from the shock of the confinement in their extremely feeble condition, and died a few hours after delivery; two others lived till the fifth and fifteenth days respectively after confinement, while the 5th died of the disease before labor came on. Of the cases entered in the Return, under the head of Disease of the Heart and Lungs—two were cases of pneumonia, one admitted laboring under the disease, sank from it soon after delivery, which was perfectly natural in every respect; the other contracted the disease 9 days after confinement, from exposure near the tank while convalescent from a confinement complicated with convulsions. The third case was admitted not in labor, but in the 7th month of pregnancy with great dyspnœa, extreme restlessness, cold extremities, and a feeble pulse. Patient could give no satisfactory account of herself, but her body generally was anasarcaous, and she was suffering from general bronchitis. While at the night chair she suddenly gave birth to a fœtus enveloped in its membranes and accompanied by the placenta, fainted and died. The uterus was found well contracted. *Post mortem* examination shewed dilatation of the heart and emphysema of the lungs.

The fatal case of dropsy was admitted in the 9th month of pregnancy to await her confinement. On the 12th December she was observed to be ill and feverish, and on examination was observed to be generally anasarcaous, her urine was not albuminous, and no disease of the heart was detected. Ordered gin with muriated Tincture of Iron, also an emollient enema. The nurse while exhibiting this enema, discovered that she was in labor, the Os fully dilated, and the membranes protruding. In a few minutes she was delivered of

a female livingchild, apparently unconscious of any contraction of the uterus having taken place.

The uterus contracted well, the oedema diminished, and the respiration improved. Took food and seemed to be improving, but died suddenly on the 4th day after taking some arrowroot which was given to her in the recumbent position.

The two last cases I believe to have been instances of painless labor, and in connection with them, I would detail shortly another case apparently of painless labor; but fortunately followed by a more satisfactory result. Ammanes *Æt.* 36, said to be the 8th month of her 4th pregnancy, was residing in hospital on account of rheumatic pains in both hips and legs. At 2 A. M. on the 17th January, 1859, she got out of bed to defecate, when without any uterine pains whatever she suddenly gave birth to a putrid fetus which fell on the floor. The cord snapped at the same time in two places, one within an inch of the umbilicus, and the other at its insertion into the placenta. The placenta was soon thrown off naturally and *the woman recovered without a bad symptom.*

The fatal case of peritonitis died of that disease while awaiting confinement. In the case of remittent fever, that disease appeared subsequent to confinement, in a natural labor, and proved fatal in 18 days. The only other fatal case among these, arising from non-*puerperal* causes, was from cholera.

Deducting the 13 cases shortly detailed, 25 remain referable to *puerperal* causes, or 1.12 per cent. of all labors. These cases have been referred to under each separate head, and the fatal result reported under more than one section. Doing so has the apparent effect of increasing the mortality, for instance under the head of Forceps operation, 9 deaths are entered, but of these 3 were caused by *puerperal* convulsions 2 by accidental hemorrhage; 3 by ruptured uterus, and appear under these heads also; while the 19 fatal cases also appear under that of difficult labor.