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REPORT

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OF THE

EDINBURGH ROYAL MATERNITY
HOSPITAL

FROM 1844 TO 1846.

BY

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PROFESSOR OF MIDWIFERY IN THE UNIVERSITY OF EDINBURGH.

FROM THE MONTHLY JOURNAL OF MEDICAL SCIENCE, NOVEMBER 1848.

EDINBURGH:
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MDCCCXLVIII.

REPORT
OF THE
EDINBURGH ROYAL MATERNITY
HOSPITAL

FOR THE YEAR 1880

BY
J. J. SIMON, M.D.

EDINBURGH:

[From the Report of the Proceedings of the Edinburgh Obstetric Society.]

REPORT OF THE MATERNITY HOSPITAL.

[THE Edinburgh Maternity Hospital was opened in St John's Street in May 1844, and continued in this locality till May 1846, when the Charity was removed to its present premises in Milton House, Canongate. The following Report comprehends an analysis of the obstetric practice of the Institution during the two years in which it was located in St John Street. The Report was drawn up and communicated to the Medico-Chirurgical Society twelve or eighteen months ago; and its publication was for a time postponed, under the hope that I might find leisure to render it still more minute and extensive. As, however, I have little prospect of fulfilling that wish, I now publish it, with the permission of the Obstetric Society, in the printed account of their transactions. And, I trust, that the continuation of the Reports of the Institution will, sometimes, be drawn up and communicated to the Society by some of the younger and more active medical officers attached to the hospital.]

At the time the hospital was opened, the directors appointed to it the following medical staff:—Drs Campbell and Beilby, consulting physicians; Dr Pagan, consulting surgeon; Drs Moir and Simpson, ordinary physicians; Dr Ziegler, ordinary surgeon; and Drs Bell, Thomson, Niven, and Carmichael, assistant medical officers. One or two advanced pupils were appointed to live in the house as resident house-surgeons.]

ANALYSIS OF THE CASES.

I. *The Number of Cases.*—Of women delivered in hospital, there were 374. Of women delivered at their own homes in various parts of the town, there were 1101; making a total of 1475 women delivered under the superintendence of the Institution. Among these are included 58 cases of miscarriage or premature labour.

II. *The Ages of the Women.*—In 1457 of the cases, the ages of the women were noted. In 18 cases the ascertaining of this point was omitted. The following table exhibits, in detail, the number of patients delivered, with their respective ages:—

Ages of the Women.	Number of Women.	Ages of the Women.	Number of Women.
16	4	33	47
17	10	34	40
18	30	35	49
19	57	36	46
20	64	37	23
21	75	38	33
22	101	39	18
23	90	40	37
24	84	41	8
25	77	42	11
26	107	43	9
27	69	44	6
28	94	45	2
29	69	46	2
30	107	47	1
31	34	48	1
32	52		
Total	...	...	1457

III. *The Quickening.*—The average period of quickening, as calculated from the intern cases where it was noted, was 183 days after the disappearance of the last catamenia.

IV. *The Duration of Pregnancy.*—In the intern cases where the data are afforded, the average duration of pregnancy, calculating from the end of the last catamenia, was 273 days. But on the preceding computation little confidence can be placed, considering the class of patients from which the data are drawn.

V. *The Number of the Pregnancy.*—In 1459 cases, the number of the pregnancy is stated, namely, whether it is the first, second, or third time, &c., the woman has been pregnant; in 16 cases it is omitted. 398 women were delivered of their first children; and thus the frequency of first deliveries was to that of all subsequent deliveries in the proportion of about 1 to 4. The following table exhibits at length the number of cases, with the corresponding number of the pregnancy in each.

Number of the Pregnancy.	Number of Women.	Number of the Pregnancy.	Number of Women.
1	398	10	38
2	294	11	24
3	161	12	11
4	158	13	7
5	116	14	2
6	88	15	1
7	65	16	1
8	57	17	1
9	36	20	1
Total	...	...	1459

VI. *The Number of Children.*—The children resulting from the 1417 labours, at or near the full time, were 1436 in number. Of these there were born

In single births	1399 children
... twin births	34 ...
... triplet birth	3 ...
Total	1436

VII. *The Sex and State of the Children.*—The children are further to be distributed as follows :—

Sex of the Child.	Number of Children.	Number Born Alive.	Number Born Dead.	Proportion of Still-births.
Male . . .	739	682	57 or	1 in every 13
Female . . .	693	650	43 or	1 in every 16
Sex not stated	4	3	1	... ..
Total . . .	1436	1335	101	1 in every 14

Excluding from the above list of still-born children 37 which were putrid, there remain 64 whose death was recent. Of these 64, there were born

Under cranial presentations	40
... breech presentations	8
... footling presentations	4
... arm presentation	1
... shoulder presentation	1
... presentation or prolapse of the cord	8
... placentar presentation	1
Presentation not stated	1
Total	64

In one of the cases of still-birth under cranial presentation, the mother had convulsions during labour ; and, in another, the child was a male twin ; in a third, the cord was twisted twice around the neck ; in a fourth, the child exhibited marks of abdominal disease ; and in a fifth, the delivery was completed by perforation. Six of the dead children were born in labours complicated with hemorrhage during or before labour.

Of the 37 children born putrid, 18 were male and 19 female infants ; and the presentations were as follows :—

The head presented in	26 cases.
... breech	6 ...
... feet	1 ...
... shoulder	1 ...
Presentation not stated in	3 ...
Total	37 ...

During pregnancy two of the mothers whose children were born putrid, laboured under syphilitic complaints ; and a third was affected with ascites and anasarca. In several of the still-born children which I took the opportunity of examining along with the pupils, effusion of coagulable lymph (the consequence of extensive inflammation) was found covering various parts of the peritoneal membrane.

VIII. *The Length of the Children.*—The extreme length or height of the child at birth is stated in 330 cases of single birth completed in the hospital. 169 of these children were male and 161 female.

Of the male children there measured in length—

Under 15 inches, 1 child	Under 20 inches, 53 children
... 16 ... 1 ...	... 21 ... 28 ...
... 17 ... 3 children	... 22 ... 21 ...
... 18 ... 14 ...	... 23 ... 3 ...
... 19 ... 45 ...	
Total	169

Of the female children there measured in length—

Under 15 inches, 1 child	Under 20 inches, 40 children
... 16 ... 1 ...	... 21 ... 32 ...
... 17 ... 1 ...	... 22 ... 13 ...
... 18 ... 10 children	... 23 ... 2 ...
... 19 ... 60 ...	... 24 ... 1 child
Total	161

Average length of male child	19½ inches
... female child	18¾ ...
... both sexes	19½ ...

IX. *The Weight of the Children*—The following table gives in detail the respective weights of 337 children delivered within the hospital, including 171 males and 166 females. The children born in plural births are excluded from the table.

Of the male children there were :—

Under 4 lbs., 4 children.	Under 8 lbs., 60 children.
... 5 ... 7 ...	... 9 ... 31 ...
... 6 ... 17 ...	... 10 ... 3 ...
... 7 ... 45 ...	... 11 ... 4 ...
Total	171 ...

Of the female children there were :—

Under 4 lbs., 2 children.	Under 8 lbs., 50 children.
... 5 ... 4 ...	... 9 ... 27 ...
... 6 ... 17 ...	... 10 ... 7 ...
... 7 ... 59 ...	
Total	166 ...

The lightest child (premature?), a male, 3 lbs. 4 oz. in weight.

The heaviest child, a male, 10 lbs. 8 oz. ditto.

The heaviest female child, 9 lbs. 7 oz. ditto.

The average male child, 7 lbs. 3 drs. ditto.

The average female child, 6 lbs. 10 oz. 11 drs. ditto.

The average of both sexes, 6 lbs. 13 oz. 7 drs. ditto.

X. *The Length of the Umbilical Cord*.—In 327 cases of children delivered within the hospital, the length of the cord was noted. Among these—

The shortest cord measured	12 inches in length.
The longest ditto	43 ditto.
The average ditto	23½ ditto.

In a note attached to the details of an extern case the cord is stated to have been 50 inches long.

XI. *Weight of the Placenta*.—In 325 of the cases delivered within the hospital, the weight of the placenta is noted.

The lightest placenta weighed 7 oz. Premature child?

The heaviest ditto, 2 lbs. 15 oz. The single placenta of twin children.

The average ditto, 1 lb. 4 oz. 14 drs.

XII. *The Duration of Labour*.—The duration of labour from the first com-

mencement of pains was ascertained in 311 cases, all delivered within the hospital. The following table exhibits the average length of the whole labour, and of the first, second, and third stages separately in these 311 cases :—

Average duration of first stage of labour, 11 hours 50 minutes.

Ditto	ditto	second	ditto	1	„	37	„
Ditto	ditto	third	ditto	0	„	38	„
Ditto	ditto	whole labour		12	„	57	„

The following table exhibits in detail the duration of the whole labour, and of each stage of labour respectively, in all the cases. It reads thus:—The whole labour was completed in 1 hour in 4 cases ; in 2 hours in 4 cases ; and so on. The first stage of labour was completed in 1 hour in 3 cases ; in 35 hours in 5 cases, &c.

Duration in Hours.	Whole Labour.	First Stage.	Second Stage.
1	4	3	161
2	4	9	65
3	7	11	20
4	16	20	16
5	17	26	10
6	16	17	2
7	28	18	4
8	21	18	1
9	17	16	2
10	20	16	1
11	20	15	4
12	12	16	0
13	23	9	0
14	14	9	1
15	8	5	0
16	6	6	0
17	6	3	0
18	8	5	0
19	10	6	0
20	3	7	0
25	22	14	1
30	12	8	0
35	5	5	0
Above 36	14	9	0
Duration not stated..... }	61	85	103

The third stage was completed in	5 minutes in	. . .	40 cases.
Ditto	10	..	88 ..
Ditto	15	..	80 ..
Ditto	30	..	104 ..
Ditto	1 hour	. . .	16 ..

Third stage completed within 1 hour in	. . .	328 ..
Ditto	1½ ..	7 ..
Ditto	2 ..	1 ..
Duration not stated in	. . .	38 ..

XIII. *The Modes in which the Children presented.*—In 1421 of the births the presentation of the child is given. The following table exhibits in detail the various presentations, and the number of each respectively in 1421 cases :—

Presentation.	Number of Cases.
Head	1333
A hand descending with the head	31
Both hands descending with the head	1
Face	6
Shoulder	3
Arm	3
Breech	27
Breech and feet	2
One or both feet	15
	<hr style="width: 10%; margin-left: auto; margin-right: 0;"/> 1421

The cord presented along with some part of the foetus in 5 cases.

The cord became prolapsed in 13 cases.

The placenta presented partially along with some part of the infant in 3 cases.

In the preceding table of presentations I have entirely omitted to classify those of the cranium, according to the different positions in which the head may present; because I do not place much reliance upon the perfect accuracy of the reports of positions entered in the hospital records by the younger pupils. In fact, one of their principal objects in hospital and dispensary instruction is to acquire, among other things, a practical knowledge of the somewhat difficult subject of positions. But I have great pleasure and confidence in citing the notes on this subject of Dr Martin Barry, who acted for sixteen months as house-surgeon to the hospital, more especially as the data which he has obtained entirely coincide and agree with the results of my own observations. Dr Barry himself carefully observed and noted the position of the head in 335 cases of cranial presentation, among the patients of the Institution. I shall classify these 335 cases according to the four positions and numerical nomenclature used by many of the German schools:—

I. Occipito-anterior Positions.

- | | |
|--|---------------|
| 1. Position; or occiput directed to left foramen ovale, | in 256 cases. |
| 2. Position; or occiput directed to right foramen ovale, | ... 1 ... |

II. Occipito-posterior Positions.

- | | |
|---|------------|
| 3. Position; or occiput directed to right sacro-iliac synchondrosis | ... 76 ... |
| 4. Position; or occiput directed to left sacro-iliac synchondrosis | ... 2 ... |

Total	<hr style="width: 10%; margin-left: auto; margin-right: 0;"/> 335 ...
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In the cases of occipito-anterior position the head was invariably found to descend and emerge, without any change or movement from the same oblique diameter of the pelvis as it was originally placed in, with one exception. In this solitary case the head rotated from the first into the fourth position, in which it was born.

Out of 78 cases of occipito-posterior position carefully watched, in 75 the occiput turned forwards, and emerged first from under the arch of the pubis. In 2 cases of the third position the occiput continued directed backwards, and the child was expelled without the usual rotation into the first position. Thus the exceptions to the rotation did not occur oftener than about once in thirty cases.

Of the two cases which presented in the fourth position, in one the rotation was performed into the first position. In the other, the head continued to maintain the same position till it was born.

XIV. *The Plural Births.*—Among the 1417 women delivered, 17 or 1 in every 83 gave birth to twin children, and in one case triplets were born.

In the *twin cases* the presentations and state of the children were as shown in the following table:—

Presentation.	Number of Cases.	Number of Children Born Alive.	Number of Children Born Dead.
Double cranial presentation . . .	8	13	3
1st child, head ; 2d child, breech	6	11	1
1st child, feet ; 2d child, head .	1	2	
1 child, arm ; other not stated .	1	2	
1 child, head ; other not stated	1	2	
Total	17 cases or 34 children	30	4

The sexes of the twin children were as follows :—

In 3 cases, both children male	6
... 5 cases, female	10
... 9 cases 1 child male and 1 female	18
<hr/>	<hr/>
Total 17	34

The average weight of the twin child was 6 lbs. 1 oz.

In the *triplet* case, two of the children presented the head, the third presented the feet. Two of the children were male, one female. All were born alive and vigorous, but, before leaving the hospital, one of the children was accidentally overlaid by its mother. The male children weighed respectively, 5 lbs. 11 oz. and 5 lbs. 2 oz. ; the female child weighed only 3 lbs. 12 oz. The labour was 8½ hours in duration.

XV. *The Mode of Delivery.*—Deducting the abortions and miscarriages, which amounted in number to 58, there remain 1417 cases of delivery about the full time. The following table shows the modes of delivery in these 1417 cases, and their relative frequency to each other. Among those naturally delivered is included a case of spontaneous cephalic evolution or expulsion :—

Mode of Delivery.	Number of Cases.	Proportion.
Naturally	1404	1404 in 1417
Artificially	13	1 ... 107
<i>Mode of Artificial Delivery.</i>		
Traction of presenting feet	1	1 in 1417
Bringing down a foot (breech presentation)	1	1 ... 1417
Turning	6	1 ... 236
Forceps	3	1 ... 472
Crotchet	1	1 ... 1417
Induction of premature labour	1	1 ... 1417

Turning was adopted in five cases for preternatural presentations, and in one case for the purpose of hastening delivery under an attack of apoplectic convulsions. The breech presentation, in which a foot was brought down, was a case in which the presenting part did not pass the brim, notwithstanding strong and powerful pains of upwards of a day's duration.

XVI. *The Complicated Labours.*—The following table contains a list of the chief complications observed in the 1417 labours, with the respective numbers and proportion of each:—

Hemorrhage from partial placenta prævia, in 3 cases, or 1 in every 472 cases					
— before labour,	12	...	1	...	118
— during labour,	4	...	1	...	354
— between the expulsion of the child and of the placenta, ...	16	...	1	...	87
— post partum,	24	...	1	...	59
— (indefinitely stated),	8	...	1	...	177
—					
Total of cases of hemorrhage, ¹	67	...	1	...	21
Convulsions during labour,	4	...	1	...	354
Prolapsus of the entire uterus to the outlet, ...	2	...	1	...	708
Rigidity of the os uteri,	11	...	1	...	128
Carcinoma of the os uteri,	1	...	1	...	1417
Prolapsus of the anterior lip of the uterus, ...	6	...	1	...	236
Expulsion of the entire ovum (membranes unbroken),	1	...	1	...	1417
Prolapsus of the cord,	18	...	1	...	79
Cord once or twice around the child's neck, in 158	...	...	1	...	9
— three times around the child's neck, ...	4	...	1	...	354
— four times do. do. do. ...	2	...	1	...	708
— encircling the neck and one hand, ...	1	...	1	...	1417
— around the neck and arm,	4	...	1	...	354
— around the neck and body,	2	...	1	...	708
— around the shoulder,	2	...	1	...	708
— around the body,	2	...	1	...	708
— around the arm,	1	...	1	...	1417
— around the leg,	2	...	1	...	708
— snapped across before delivery 12) inches long),	1	...	1	...	1417
Amaurosis and delirium before delivery, ...	1	...	1	...	1417
Gangrenous slough from the interior of the rectum,	2	...	1	...	708

XVII. *The Instrumental Deliveries.*—Instruments were had recourse to in very few cases. The following table exhibits the number and proportion of the deliveries in the 1417 labours:—

Instrumental delivery, in 4 cases, or 1 in every 354 cases				
Viz. Delivery by the forceps, ...	3	...	1	...
Delivery by the crotchet, ...	1	...	1	...

Of the four mothers, one died eight days after delivery from puerperal fever. She had been in labour upwards of two days, and was ultimately delivered of a dead child by the short forceps. Of the children extracted by the forceps, two were still-born. In both cases the head had descended into the pelvis before the instruments were applied. In one of these two cases the hospital record states, that, from the state of the cord, the child appeared to have been dead for some time before delivery. It was born after above two days' labour. In the second case the woman had been upwards of twenty-four hours in labour. Convulsions came on an hour and a half before delivery, and returned several times. The child was of very large size, weighing 10 lbs. 2½ oz.

Delivery by the crotchet was resorted to, in consequence of the head of the child being arrested at the brim of a distorted pelvis.

The proportion of cases in which instrumental delivery was had recourse to in the Edinburgh Hospital, was smaller than in most other Obstetric Institu-

¹ In the Hospital books "hemorrhage" is frequently noted when there was a more than usual loss of blood, although it may have been in comparatively small quantity.

tions. The following table will perhaps illustrate this point more fully than any more lengthened remarks. The first column of figures shows the absolute number of labour cases reported by the different practitioners named; the second column shows the proportion of instances in each of the returns in which the practitioner resorted to delivery by instruments; and the third and fourth columns respectively show the comparative proportion in which the two modes of instrumental delivery (the forceps and crotchet) were employed by each practitioner. It will be seen how frequently the forceps were employed by some in comparison with craniotomy; how frequently craniotomy was employed by others in comparison with the forceps; and how very different the proportion of cases supposed to require instrumental delivery at all, is in the practices of different medical schools and institutions.

Table showing the Proportion of Instrumental Deliveries, and of Deliveries by the Forceps and by Craniotomy in different Obstetric Institutions.

Name of Reporter.	Total Number of Labours Reported.	Proportion of Instrumental Deliveries.	Proportion of Deliveries by Forceps.	Proportion of Deliveries by Craniotomy.
Siebold—Berlin	2093	1 in 7	1 in 7	1 in 2093
Busch—Berlin	2056	1 ... 11	1 ... 12	1 ... 342
Carus—Dresden	2549	1 ... 13	1 ... 14	1 ... 283
Nægele—Heidelberg	1711	1 ... 31	1 ... 31	1 ... 1711
Bland—Westminster	1897	1 ... 95	1 ... 158	1 ... 237
Beatty—Dublin	1182	1 ... 98	1 ... 131	1 ... 394
Collins—Dublin	16,654	1 ... 115	1 ... 617	1 ... 141
Churchill—Dublin	1640	1 ... 117	1 ... 546	1 ... 149
Lever—London	4666	1 ... 137	1 ... 518	1 ... 186
Boer—Vienna	9589	1 ... 199	1 ... 274	1 ... 737
Lachapelle—Paris	22,243	1 ... 252	1 ... 293	1 ... 1854
Ramsbotham—London	48,682	1 ... 322	1 ... 553	1 ... 773
Simpson—Edinburgh	1417	1 ... 354	1 ... 472	1 ... 1417

XVIII. *The Maternal Deaths.*—Among the 1475 women delivered under the superintendence of the Institution, eleven deaths occurred, or one in 134. Of these, seven occurred among the cases delivered in the hospital, and four among the out cases.

Four of these eleven patients were in their first labours; three in their second; and the remaining severally in their third, sixth, ninth, and twelfth.

The cause of death was,—

Puerperal fever and inflammation in	7 cases
Puerperal convulsions in	2 ...
Chest disease in	1 ...
Fatal sinking after incision of a carcinomatous os uteri in	1 ...

Total, 11 deaths.

The delivery was effected by the natural efforts in nine of the cases; by the forceps in one of the cases dying of puerperal fever; by turning in one of the cases dying of convulsions,—the body, on dissection, presenting a large clot of effused blood in the brain, and a collection of pus in one of the kidneys. In the case where the os uteri was incised for carcinoma, the mother had been in labour for two or three days, and the pulse had become very rapid, &c., before the operation was adopted. The child was subsequently born in the course of four or five pains. But the pulse never rallied after delivery, and she died on the third day.

I have merely further to add, that the convalescence of the hospital patients was often interrupted by febrile and inflammatory attacks. The house, No. 3, St John Street, used as an hospital, was, in addition to a sunk kitchen flat, three storeys in height, with two rooms in the first and second flats, and three in the third ; and it was much too small for the accommodation of the patients, and of the resident house-surgeons, matron, &c. The rooms themselves were low-roofed, and very imperfectly ventilated. Various plans were attempted to improve the ventilation, but not with much success. Whenever the hospital became in any degree crowded, fevers (or weeds), with more or less abdominal tenderness, appeared among the patients ; and frequently the supervention of such attacks during convalescence became so common, as to constitute the rule rather than the exception to it. Every one acquainted with hospital practice, whether obstetric, surgical, or medical, is well aware of the great liability among the patients to febrile and inflammatory attacks whenever the wards are overcrowded ; and in no practice is this more visible than in midwifery. Indeed, I believe there are few or no circumstances which would contribute more to save surgical and obstetric patients from phlebotic and other analogous disorders, than a total change in the present system of hospital practice. I have often stated and taught, that if our present medical, surgical, and obstetric hospitals were changed from being crowded palaces, with a layer of sick in each flat, into villages or cottages, with one, or at most two patients in each room, a great saving of human life would be effected. And if the village were constructed of iron (as is now sometimes done for other purposes), instead of brick or stone, it could be taken down and rebuilt every few years ; a matter apparently of much moment in hospital hygiene. Besides, the value of the material would not greatly deteriorate from use ; the principal outlay would be in the first cost of it. It could be erected in any vacant space or spaces of ground, within or around a city, that chanced to be unoccupied ; and, in cases of epidemics, the accommodation could always be at once and readily increased.



