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ART. I. — *Statistics in Midwifery.* By JNO. GEO. METCALF, M. D., M.M.S., member of the American Statistical Association of Mendon, Massachusetts.

ALTHOUGH the word *statistics*, applied to medical subjects in a strict sense, only "relates to the detail of facts connected with the salubrity, mortality, &c., of different countries and situations," yet, in spite of the lexicographers, it has come to have a much more extensive *conventional* signification. In the study of disease it is understood to comprehend the collection, arrangement and comparison of the symptoms, methods of treatment, termination, localities, &c.; while in midwifery, it deals with the classification of the phenomena and results of parturition.

Notwithstanding the cry, long and loud, against the numerical method of observation, by the cotemporaries of its author, there can be little doubt that it has materially aided in the establishment of a greater certainty in diagnosis, and of more expeditious and surer means of cure. The fame of the chief of La Pitié, we imagine, will long outlive the attacks of his opponents, upon his recommendation to study disease by clinical observation; and far down along the history of the great medical commonwealth of the world, Louis will stand out upon its pages "clarum et venerabile nomen."

Books have been *written* upon the subject of midwifery from the periods of a remote antiquity; but before the invention of the art of printing, we shall, at once, perceive that whatever had been learned by the practitioners of our art, could never have been very widely diffused, and, consequently, that its progress must have been comparatively slow. Could the records of the Egyptian midwives, the essays of Cleopatra and Aspasia,

have been multiplied with the rapidity of modern art, who would doubt that the torculum volvens of Rhazes, or the rude forceps of Avicenna, had been arrived at some centuries earlier in the history of obstetrics? Could the author of the "Liber Divisionum" have set up a printing press in the city of Bagdad, who would stake his reputation as a prophet, that some Ambrose Paré had not conferred renown upon the metropolis of his country some cycles in advance of the Parisian reformer? Could Faust, or Caxton, or Wynkyn de Worde have flourished in the reign of the Caliphs, who would believe that the impellens and the almisdach of Albucasis had preceded, by almost the space of a thousand years, the finished instruments of a Smellie and a Baudelocque? Instead of waiting until the days of Edward the Second, John á Gaddesden had been gazetted as court physician in the times of the Saxon heptarchy, or commissioned as Surgeon-general in the army of the Norman Conqueror. Instead of procrastinating the publication of the *first printed* book, upon the subject of midwifery, until the middle of the sixteenth century, "The Byrth of Mankynde, or the Woman's Booke," would have had its title-page antedated at least five hundred years, and its imprimatur issued from Ispahan instead of London.

With the printing press, the steam engine, and the magnetic telegraph for his antagonists, who will dare fix limits to the march of improvement in this nineteenth century? Thanks to a Faust, a Watt and a Morse, nothing can arrest the onward progress of the arts of civilization and refinement. By the aid of their inventions, knowledge, no longer hid beneath the arbitrary technicalities of monkish Latin, or the impenetrable mysteries of Chaldean hieroglyphics, is sown broad-cast, almost without money and without price, through the whole circumference of the habitable globe. In these latter times, as if by the wand of the magician, labour is changed to pastime, space is annihilated, and thought is endowed with the attribute of omnipresence. In sixty days, discoveries, made upon the banks of the Delaware, may be exerting their beneficial influences, for the cure of the Hindoo, upon the banks of the Ganges. Every sail that whitens the ocean by day, and every steamship which kindles her beacon-fires by night, upon its broad expanse, are freighted with the interchange of free thought and opinion and experience. Paris and London have become our next door neighbours; and we feel as if the minds which are giving direction to the talent and industry of these brilliant foci of medical improvement were our familiar friends.

Having our lot cast in such pleasant places, and living amid such a flood of professional light, let us take heed that we do not treasure up for ourselves the scorn of posterity; by the exercise on the one hand, of that fatuous conservatism, which adopts no improvement because it is new; and, on the other, of that reckless spirit of the radical, which demands that we raze everything to the foundation before it deigns impart to us the knowledge of the superstructure it will rear in its stead.

"Nullius addictus jurare in verba magistri," should be the motto of every seeker after medical truth. Nothing should be adopted or condemned upon the dicta of authority; nothing received or rejected but after patient, thorough and impartial investigation. Follow truth wherever she may lead; despising, on the one hand, that slavish submission to theory and hypothesis, which contents itself without farther attempt at progress; and, on the other, that criminal surrender to a shameless empiricism, which regards its wasteful sacrifice of human life only as a matter collateral, and subsidiary in its senseless search after panaceas and specifics.

But the limitless capabilities of the press, the engine and the telegraph are not *alone* sufficient to achieve the moral, physical, or intellectual regeneration of the world. Notwithstanding the immeasurable energies they operate with, theirs would be the labours of Sysiphus, as unavailing as they might be endless. To render them effective, mind, powerful, energetic and constant, must be brought into active co-operation. Advances from the old resting places must be made; something new and better and more practiced than the heir-looms of antiquity must be accomplished, or the printing press might as well have never superseded the parchment of the scribe, the steamship the primitive craft of the Argonauts, or the magnetic telegraph the mail in the days of Franklin.

To fulfil his duty, then, the *good* physician can be no idler. His is no sinecure position in society. No stewardship of the Chiltern Hundreds allows him to retire from the field of his labours with his laurels untarnished. Exemption from toil, inglorious ease, are terms which find no place in the vocabulary of *his* language. The close of pupilage sets up no terminus to study. It is but the pleasant preparation to a life of toil. To have won the diploma, with its blue ribbon and seal, is but the incipient stage in a long and rugged journey. There is something to do afterwards; something which, while it makes large drafts upon his physical powers, will, at times, task to the verge of utmost tension his every intellectual resource. Some things, too, besides books are to be attended to. The eye, the ear, and the sense of feeling, must be professionally cultivated. Individuality, causality and comparison must not be suffered to rust out in the criminal indulgence of inactivity. Duty to ourselves, our patients, to the profession, and to God, call on us to work while the day lasts.

But this is not all. The facts gathered up by experience, and the results of philosophical induction must not be trusted to the hazard and uncertainty of tradition or manuscript. The leaves of the sybil and the papyri of the copyist often perished before the memory of their authors. Of the five hundred thousand volumes, sacrificed to sectarian zeal, by the Arabian fanatic, who ever heard of a duplicate? It then becomes a duty that everything which will aid, however remotely, in the advancement of science, should be preserved with care. Copies should be multiplied, so that the truths of the original may be more widely diffused, and to guard against the contingency of their extinction by carelessness or accident.

And what if the offering we bring to the common treasury be small? If it affords *any additional* light, the insignificance of its value furnishes no sufficient reason for withholding it. The little spring which trickles from some narrow crevice upon the western slope of the Alleghanies goes to help swell the magnificent Mississippi. So with contributions to medical improvement; singly and alone they add but little to the stock of medical knowledge; but, by collocation and comparison, they furnish ample data from which numerous and invaluable practical results may be deduced. If no *monographs* had been written, the press, we imagine, would have found it no Herculean labour to have supplied the *books* for the physician's library. Medical *book-making*, (and we intend no disparagement by the term,) from the great multitude of materials which has been accumulating for centuries, has come, and necessarily so, to consist, *principally*, in the drudgery of compilation; requiring, we are ready to admit, no trifling amount of patient research and sound discrimination.

Endeavouring to add somewhat, if only a modicum, to the mass of knowledge already laid by in the garners of medical improvement; trusting that some useful truths may be more fully illustrated or more deeply impressed, the following contribution to an important branch of vital statistics is now offered for the consideration of the profession.

The following pages will contain an analysis of 927 cases of midwifery, 546 having occurred in my own practice. To my friends Dr. Southwick, of Blackstone, Dr. Field, of Leominster, Dr. Stone, of Hardwick, Dr. Workman, of Worcester, and Dr. Wheeler, of Paxton, I am indebted for the balance; 201 of which occurred in the practice of Dr. Southwick. They will accept my thanks for their kindness in allowing me to make use of them in the present communication. To Dr. Field, of Leominster, I am particularly obliged for his copious notes upon his cases of puerperal fever, and trust *he* will pardon me, as there can be no doubt *our readers* will, for the liberal drafts I have made upon them.

1. *The whole number of children.*—The 927 cases of delivery gave birth to 932 children; there being five cases of twins.

2. *Illegitimate children.*—Of the 927 mothers, 914 were married and 13 were not; thus furnishing a ratio of 1·4 for every illegitimate to every 100 children born in wedlock. Of the mothers having illegitimate children, two were widows, each with a family of five children. One belonged to the upper the other to the lower ten thousand in society. Of the others one was forty-three, and the remaining ten were all under twenty-three years of age.

3. *Age of the mother when married.*—Of the 927 mothers, their ages when married were ascertained in 568 instances. The following table will exhibit their ages; thus three were married at 14 years of age, and so on.

Age of 568 mothers when married.

Age,	14	15	16	17	18	19	20	21	22	23	24	25
No. of mothers,	3	3	23	61	70	56	73	58	43	41	40	29

Age,	26	27	28	29	30	31	32	33	35	36	38	41
No. of mothers,	23	14	10	4	6	4	2	1	1	1	1	1

The united ages of the 568 mothers amount to the sum of 11,991 years; thus furnishing the sum of 21 years and 11 hundredths as their average age, when married. By a law of this commonwealth males under twenty-one years of age, and females under eighteen cannot *legally* enter the marriage relation, without the consent of their parents or guardians. By an inspection of the foregoing table, we shall find there were 90 mothers who could not have been *legally* married without such consent.

The perpendicular lines, as will be seen, divide the *preceding* table into six equal periods of four years each. The *following* one exhibits the number of women married in each of the six periods; thus, during the first period, comprising the ages of 14, 15, 16 and 17, there were 90 women married, and so on.

Number of women married in each period.

Periods,	1st.	2d.	3d.	4th.	5th.	6th.
No of women,	90	257	153	51	13	4

From the data furnished by the foregoing table, the probabilities of marriage (so far as the limited number of cases, in the present paper, may be allowed to settle a matter of such grave import), may be calculated with a close approximation to the truth. The following table exhibits the per centage of the probabilities of marriage during each of the six periods of the preceding table. Thus, a woman, single at the *beginning* of each of the six periods, will have as many chances for matrimony during that period, as are expressed, by figures on the line immediately below.

Chances of marriage during six periods.

Periods,	1st.	2d.	3d.	4th.	5th.	6th.
Per centage of chances,	16	45	27	9	2·3	·7

4. *Age of the patient when delivered.*—Of the 927 cases, the age of the patient, when delivered, was noted 591 times. The ages of the different women extend over a period from 14 to 46 years. The following table will show the distribution of the whole number of births occurring at different ages, and is to be read thus; one was delivered at 14 years of age, and so on.

Age of 591 mothers when delivered.

Age,	14	15	17	18	19	20	21	22	23	24	25	26	27	28	29	30
No. delivered,	1	1	6	20	25	26	29	40	32	34	25	35	44	26	20	36
Age,	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
No. delivered,	18	22	20	18	17	24	14	13	11	11	4	7	4	5	1	2

As will be seen, the perpendicular lines divide the *preceding* table into eight equal periods of four years each. The *following* table will exhibit the number of deliveries in each of the periods; thus, during the first period, comprising the ages of 14, 15, 17, and 18, there were 28 deliveries, and so on of the other periods.

Number of deliveries in each period.

Periods,	1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.
No. of deliveries,	28	120	126	126	78	68	33	12

To medical men the following table will be more curious than useful; while, to him who is conversant with last wills and testaments, and who is deep in the mysteries of "cross" and "contingent remainders," it may afford some useful hints. So far as the paucity of cases may be relied on to establish a rule, the calculation of the chances of pregnancy, exhibited in the following table, bating the fractions (which were not taken into the account) may be relied on as correct. The table is to be read thus:—a woman marrying at the *commencement* of either of the eight periods, will have as many chances, out of an hundred, of becoming pregnant, during that period, as are expressed by the figures on the line immediately below such period.

Chances of pregnancy.

Periods,	1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.
Chances of pregnancy,	5	20	21	21	14	12	5	2

In Collins' Midwifery, a table is given of the ages of 16,385 women at the period of their delivery. His cases occurred, it will be remembered, in the wards of a Lying-in-Hospital, in a crowded city; they were furnished, principally, from the lower and poorer classes of society, and, consequently, should be expected to present somewhat different results when compared with the experience of private practice, where the patients were drawn from all classes of society, and who were located in a country region proverbial for its healthfulness. The following table is constructed for the facility of comparison, and is to be read thus: of 16,385 cases of delivery at Dublin, 5 per cent. occurred in patients under 20 years of age, and of 591 cases at Mendon, 9 per cent. occurred in patients under the same age, and so on.

Comparison of Dublin with Mendon.

Places of observation.	Under 20 years.	20 to 30 years.	30 to 40 years.	Over 40 years.
Dublin, Ireland,	5	62	30	3
Mendon, Mass.	9	52	33	6

5. *Whole number of pregnancies.*—Of the 927 cases, the whole number of times which each patient had been pregnant was ascertained in 916. They are arranged in the following table, and are to be read as follows, thus: 244 were 1st pregnancies, and so on.

Number of times each patient had been pregnant.

No. of pregnancy,	1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.	9th.
No. of patients,	244	197	141	111	80	56	28	17	13
No. of pregnancy,	10th.	11th.	12th.	13th.	14th.	16th.	17th.	20th.	
No. of patients,	10	8	4	2	2	1	1	1	

As may be determined by an inspection of the foregoing table, it will be seen that the aggregate pregnancies of the 916 patients were 3033; thus averaging three pregnancies and a fraction to each patient. While speaking of pregnancies in this connection, we shall be cautious about claiming

perfect accuracy; when we bring to mind the very great unwillingness which most women manifest to answer, when inquired of about the subject of abortion. All that can be claimed for this table is an approximation to the truth. For the fuller understanding of this subject, the following table exhibits the ratio of the different pregnancies to 1000 cases; and is to be read thus: in every 1000 cases, 266 will be 1st pregnancies, and so on.

Ratio of the different pregnancies to 1000 *cases.*

No. of pregnancy,	1st.	2d.	3d.	4th.	5th.	6th.	7th.	8th.	9th.
Ratio,	266	215	153	121	87	63	30	18	14
No. of pregnancy,	10th.	11th.	12th.	13th.	14th.	16th.	17th.	20th.	
Ratio,	11	8	4	2	2	1	1	1	

6. *The duration of labour.*—I am aware there is considerable difficulty in fixing the precise time when labour commences. Of any of the changes which may be supposed to occur before those recognised by the mother we know nothing. I have called the duration of a labour that interval of time which elapses between the incursion of pains which continue with short intermissions until the birth of the child; or between the rupture of the membranes and the same event.

Almost invariably, I have found that two or three loose dejections, pretty soon succeeded by pain in the pubic region, or low down in the back, were sure precursors of labour. Never, but in one case, have I known the beginning of labour protracted beyond twenty-four hours after the rupture of the membranes.

Of the 927 cases of labour, its duration was noted in 924 instances, as may be seen by the following table; and which is to be read thus: eight were delivered in one hour after the commencement of labour, and so on.

Duration of labour in 924 *cases.*

Hours in labour,	1	2	3	4	5	6	7	8	9	10	11	12	13	14
No. of women,	8	38	24	33	29	74	29	63	20	39	10	149	20	12
Hours in labour,	15	16	17	18	19	20	21	22	23	24	25	26	27	28
No. of women,	12	13	17	28	5	12	4	9	5	136	4	2	3	7
Hours in labour,	29	30	31	32	33	34	36	37	40	41	42	47	48	49
No. of women,	4	13	1	5	2	3	32	1	11	1	4	2	17	1
Hours in labour,	50	56	60	65	66	67	69	70	72	85	90	96		
No. of women,	2	5	4	2	1	1	1	1	2	1	1	1		

By the preceding table it will be seen that of the 924 cases noted, 516 labours were completed within 12 hours; 273 between 12 and 24 hours; 76 between 24 and 36 hours; 36 between 36 and 48 hours, and 23 were protracted beyond 48 hours. Of the 16,414 cases noted by Dr. Collins, in the Dublin Lying-in Hospital, the duration of labour was ascertained in 15,850 instances. The following table furnishes the per centage of the duration of labour in that Institution, with the results arrived at by the preceding table.

Comparison of Meadon with Dublin.

Places of observation.	Under 12 hrs.	12 to 24 hrs.	24 to 36 hrs.	36 to 48 hrs.	Over 48 hrs.
Dublin, Ireland,	95·1	3·1	0·8	0·5	0·3
Meadon, Mass.	55·8	29·5	8·3	3·9	2·5

Can the very great disparity in the results of the preceding comparison be accounted for by the difference between the hospital practice of the city and the private practice of the country? I am aware that the hard-worked, poorly clothed, and poorly fed patients, collected from the narrow lanes and filthy purlieus of a great city, cannot be expected to exhibit the same pathological conditions, or the same catenation of obstetrical phenomena, as the robust, well fed, and warmly clad inhabitants of the country. Especially must we allow there is reason for difference when the collocation brings the squalid and suffering Irish-woman into juxtaposition with the happy and healthy country-woman of our own commonwealth. But making all reasonable abatement on the score of differences that are plain and obvious, the discrepancy between the results arrived at, at the two places of observation, is still too great not to prompt the desire for a fuller and more satisfactory solution of the problem. The question still remains unanswered why 95 per cent. of cases of midwifery, in the hospital practice of Dublin, should be completed within 12 hours, while only 55 per cent. are completed in the same time in Massachusetts; or why 25 cases out of every 1000 are protracted beyond 48 hours in Mendon, and only three in Dublin.

The following table contains an analysis of all the cases, 23 in number, where the labour was of longer duration than 48 hours.

Number of case.	Age of patient.	No. of pregnancy.	Hours in labour.	Presentation.	Alive, dead, or putrid.	Sex.	Weight.	Observations.
1	23	2	69	Vertex.	A.	M.	8	
2	17	1	50	One foot.	A.	F.	10	O.
3	35	12	70	Both feet.	D.p.	M.	6	O.
4	21	1	60	Vertex.	A.	M.	9	
5	29	4	50	Breech.	A.	F.	8½	O.
6	23	1	90	Vertex.	D.	M.	10½	O.
7	36	2	50	Face.	A.	F.	9	O.
8	31	5	56	Vertex.	A.	M.	8	
9	17	1	65	do.	D.	M.	7½	
10	18	1	56	Face to pubis.	A.	M.	7	O.
11	17	1	60	Vertex.	A.	M.	8	
12	39	3	96	do.	A.	F.	8½	O.
13	20	2	72	do.	A.	M.	9	
14	17	1	67	do.	D.	M.	7	
15	21	1	85	do.	A.	M.	8	O.
16	38	7	72	Breech.	D.	M.	9	O.
17	27	2	56	Vertex.	A.	F.	8½	
18	23	3	56	do.	D.	M.	8	
19	16	1	66	do.	A.	F.	7	
20	19	2	56	do.	A.	M.	8	
21	17	1	60	Both feet.	D.p.	F.	7	O.
22	26	4	65	Vertex.	A.	M.	7	
23	21	1	60	do.	A.	F.	8	

Observations.—Case 2 was a first pregnancy, and the child, weighing ten pounds, was born alive, after a labour of fifty hours. The membranes were ruptured early in the labour, and the right foot soon came down. No attempt was made to bring down the other foot, and the protraction of the labour seemed to be principally owing to the difficult passage of the hips through the bony passage. The pains, for the most part, were not severe or striving.

Cases 3 and 21 were presentations of both feet, and both the children were dead and putrid. The pains in both cases were, for a great portion of the time, feeble and irregular. The membranes were ruptured early in the labour, and the peculiar fetor of decomposition was directly noticed; in one case, so pungent as to pervade the whole house.

Cases 5 and 16, the breech presentations, were large children, and the length of the labours, although the pains, for the most part, were strong and regular, seemed to be principally owing to the difficulty of their passage through the superior strait of the pelvis. There was no difficulty in the delivery of the head in either case. In number 16, the child had been dead many hours before the termination of the labour.

Case 6 was delivered by lessening the head and the use of the blunt hook. The mother had a rapid recovery—has since become pregnant and been delivered of a living child, after a short and easy labour, without assistance.

Cases 7 and 10, being the face and the face to the pubis presentations, were undoubtedly protracted by the peculiarity of the presentations.

Case 12 occurred in a patient who passed eighteen years, from the birth of her last child until the present, without once becoming pregnant. The unusually lengthy labour was principally, if not wholly, owing to the contraction of the pelvis. Both her former labours were long and tedious, and attended with much suffering.

Case 15 was a first pregnancy, and its protracted duration was attributed to the shortness of the sacro-pubic diameter. The child was born by the natural efforts, and both it and the mother did well. She has since removed to a distant part of the country, and has given birth to two sons and a daughter, after long and tedious labours.

The following table exhibits the per centage of the different presentations of the protracted labours.

Presentations of 23 cases of protracted labour.

Presentations,	Vertex.	One foot.	Both feet.	Breech.	Face.	Face to pubis.
Per centage,	69·6	4·3	8·7	8·7	4·3	4·3

7. *Flooding.*—Of the 927 cases of delivery, 838 were noted. In these flooding occurred in 27 cases only. Of these 27 cases, five occurred during labour and before the birth of the child; fifteen after the birth of the child and before the delivery of the placenta, and seven after the delivery of the

placenta. The flooding before the birth of the child ceased, or was greatly moderated, upon the rupture of the membranes. That after the birth of the child, and before the expulsion of the placenta, was speedily checked by the delivery of the placenta, or, soon afterwards, by the use of opium and acetate of lead, the liquor cupri sulphatis of the U.S. Pharmacopœia, ergot, &c. The flooding after the expulsion of the placenta was arrested by the same means. In no case was the hemorrhage so excessive as to become alarming. The patients all speedily recovered.

8. *Convulsions.*—Of the 927 cases, convulsions occurred only in *two* instances. An account of one of these cases was published in an article, "Statistics in Midwifery," in the October number of this Journal for 1843. Of the other no notes were furnished by my correspondent, in whose practice it occurred. This is the more to be regretted as such cases are of rare occurrence; and, as much doubt hangs over their pathology, every case should be subjected to a rigid scrutiny.

9. *Puerperal fever.*—Under this head are included puerperal peritonitis, metritis and crural phlebitis. In the 927 cases, puerperal fever made its appearance in 12 patients. *Two* of these cases were reported in the paper before referred to, and the remaining *ten* were furnished by my correspondents. Nine of the ten occurred in the practice of Dr. C. C. Field; and I am indebted to his kindness for the liberty of presenting the following transcript of his notes.

Case I.—Mrs. S——, aged 21, general health good, was confined on Saturday morning, Aug. 25, 1844, with her first child, a girl, after a natural and not difficult labour, which had continued through the preceding night. Sunday evening, Aug. 26, she was seized with chills, headache, pain in the back and limbs, and severe pain with tenderness in the bowels. This state was soon followed by high fever, thirst, quick pulse, &c. She had prescribed for her, and took calomel and antimonial powder that night, to be followed by salts and senna next morning.

Monday, Aug. 27th.—Medicine operated freely and with some relief to the pain in the head, back, limbs and bowels. Skin hot but moist, pulse quick, thirst urgent, bowels still tender. In the evening took 2 grs. of calomel and 1 gr. of ipecacuanha in pill, to be repeated in six hours, and Seidlitz powders next morning.

Tuesday, 28th.—I was this day called to take charge of the patient, as her attending physician was obliged to leave town for a week. When I arrived the pills and Seidlitz powders had operated three or four times. Pain in the head and limbs had ceased; pulse 120 beats in a minute; tongue covered with a brownish-white coat; tenderness and swelling of the abdomen; a "fever turn," with flushed cheeks in the afternoon; lochial discharge very scanty, and no secretion of milk. Skin was moist; thirst urgent; not much restlessness; patient *not* despondent. On account of the tenderness of the bowels she had not been out of bed for two days. I prescribed 2 grs. of calomel and 4 grs. of antimonial powder to be taken in the afternoon, and another dose in the evening of the same quantity; also 2 grs. of calomel and 1 gr. of ipecacuanha, in pill, at midnight, to be followed by

a wineglassful of a solution of Epsom salts with magnesia in the morning, once in three hours, until free catharsis was produced. The solution of Epsom salts is made by dissolving 2 oz. of the salts in a pint of water, adding a tablespoonful of magnesia.

Wednesday, 29th.—Patient had slept some in the night; skin moist; pulse 112; thirst less; tenderness of the bowels much abated; lochia scanty and no secretion of milk. She had taken three doses of the solution of salts which had procured six or eight dejections. Prescribed Dover's powder at bed-time and 2 grs. of calomel and 4 grs. of James' powder once in four hours for the next day. Solution of gum arabic, rice or crust water, &c., for drinks.

Thursday, 30th.—Patient had passed a quiet night; pulse 100; but little tenderness of the bowels; she could turn upon her side in bed without much suffering; sat up long enough to have her bed made in the morning. Had taken the calomel and antimonial powder through the day, and is to continue same through the night.

Friday, 31st.—Pulse 96, and other symptoms improving. As there had been no motion of the bowels since the 29th, she took a dose of the solution of the salts, which produced two or three dejections. Is to take a Dover's powder at bed-time.

Saturday, Sept. 1st.—Patient says she feels more comfortable; pulse 90; skin moist with some heat; tongue moist with a thick, dark coat; took calomel and James' powder in the forenoon and afternoon, a pill of calomel and ipecacuanha at bed-time, to be followed by castor oil in the morning.

Sunday, 2d.—Medicine had operated well; pulse 84; all other symptoms better; patient complains of tenderness of the gums, and there is some mercurial fetor in the breath. Omit all medicine. Arrowroot and gruel for nourishment.

Monday, 3d.—Patient sat up half an hour this morning; pulse 72; feels faint at the stomach;" has some salivation. Prescribed a wineglassful of infusion of chamomile and valerian, three times a day; her bowels to be moved, every second day, by an infusion of senna, figs, and ginger. Arrowroot, &c., for nourishment. The infusion of senna is made by infusing 1 oz. of senna, 4 oz. figs, and a teaspoonful of ginger in a pint of boiling water. Dose, half a tumblerful, to be repeated if necessary.

After four or five days the sore mouth ceased, the tongue became clean; the appetite returned; secretion of the milk took place and a perfect convalescence ensued. Her health has continued good and the child is robust.

I may here remark that in this case, as in all the others, occurring within the first week after confinement, the subjects of the fever, during the latter months of pregnancy, had an unusually good appetite, which had been freely indulged, and they had become quite plump in flesh—I might almost say fat.

Case II.—Miss C—— W——, unmarried, healthy, was confined on the morning of the 18th of September, 1844, after a natural labour with her first child, a girl. She was in labour most of the night, but it was not difficult or tedious. She was quite comfortable during the first week. Her nurse then left her, and she was obliged to leave her bed and room and take care of herself and family, consisting of her father and brother and sister. She kept about for nearly a week, when, after washing and hang-

ing out the clothes, she was attacked with chills, pain in the bowels and headache.

1st day. Saw her to day for the first time. She informed me she had felt some pain and tenderness of the bowels ever since she had left her room. Had taken castor oil twice but without relief. I found her pulse quick, tongue coated with a white fur; bowels tender and painful; but slight secretion of milk; lochia had ceased for some days. I left her two pills of calomel and ipecacuanha, each containing two grs. of calomel and one gr. of ipecacuanha, one to be taken then and the other in six hours, to be followed by salts and senna in the morning, in divided doses. Warm fomentations of hops and spirits to the abdomen.

2d day. Did not see her this day until evening. Found the stomach had rejected the pills and infusion of senna and salts. Pulse one hundred and thirty; abdomen very much swelled and excessively tender; shoulders raised by pillows, and feet drawn up to relieve the tension of the abdominal muscles; cheeks flushed; skin hot and dry; thirst urgent; frequent vomiting of green matter and constant hiccough. Prescribed powders, each containing two grs. of calomel and one-sixth of a gr. of morphine, to be taken once in four hours, and a blister to be applied over the whole bowels. Her mouth to be frequently moistened with a solution of gum arabic. She had no nurse but was dependent for what care she had taken of her, upon the neighbours. Her father was so poor as to afford nothing but the commonest necessaries of life when the family were well, and, of course, none of the conveniences of sickness.

3d day. Blister had filled well throughout its whole extent; vomiting had ceased as also the hiccough; pulse one hundred and thirty; bowels less painful and tender, but could not bear to be moved in bed; skin moist but hot; thirst still urgent, &c. Prescribed two grs. of calomel without the morphine, once in four hours, and gum arabic, in solution, for drink. Saw her again in the evening. Had flushed cheeks and a high "fever fit." Other symptoms same as in the morning. The stomach remaining quiet and no operation from the bowels yet, I prescribed three grs. of calomel, once in six hours, and a wineglassful of the solution of salts with magnesia, once between each powder, and to be continued, if the stomach tolerated the medicine, till free purging was produced.

4th day. Patient had slept some. The medicine had been retained and operated freely, some eight or ten times, with marked relief to all the alarming symptoms. Pulse one hundred and eight; fever less; less tenderness of the bowels, though she thought she could not be got up in a chair on account of the remaining soreness. Prescribed calomel and James' powders once in six hours through the day and night, and a wineglassful of the solution of salts with magnesia the next morning, and to be repeated if need be.

5th day. Patient had slept some with moisture of the skin; pulse one hundred; fever less; skin hot but moist; thirst less; pain and tenderness in the bowels much relieved, could be turned on her side and lie awhile; medicine had operated kindly, three or four times during the day. Take Dover's powder at bed-time.

6th day. Pulse ninety and all other symptoms better. Sat up in a chair long enough to have her bed made and clothes changed. Have a Dover's powder at night.

7th day. Patient better, gums a little tender. Omit all medicine and be allowed to take liquid nourishment.

8th day. Pulse seventy two; fever gone. Had a slight salivation for four or five days. During the second week the treatment was similar to that of the first case, and, like that, terminated in perfect recovery. The milk returned as convalescence progressed, and her health has been good up to this day.

Case III.—Mrs. B—— was confined with her third child Oct. 15th 1844. The child was a male. With this, as with her other children, she had an easy labour and was so comfortable, during the first week, that she left her room and went about the house the beginning of the second. Towards the close of the second week, after "lumping up some butter" and eating freely of a boiled dish for dinner and some of the same, *cold*, for supper, she was seized with symptoms of peritonitis. During the night the stomach relieved itself of its load, and she took a dose of castor oil the next morning, which operated well, but without affording any relief. When I first saw her, the latter part of the day following the supper of "cold victuals," she was labouring under symptoms similar to those of case 2d, except that there was no vomiting. She took a pill of two grs. of calomel and one gr. of ipecacuanha to be followed by the solution of salts with magnesia, until free catharsis should follow. As the stomach tolerated the medicine a favourable impression was made on the disease at the outset. The 2d day she took the pills, and the 3d, salts again. The inflammation abated rapidly and was gone on the sixth day from its incursion. The appetite soon returned, the milk was restored and perfect convalescence ensued by the 9th day of the disease. No mercurial effect on the system was noticed.

Case IV.—Mrs. D——, aged 29, healthy, was delivered Dec. 17, 1844, of her first child, a girl, after a natural labour, which continued through the night. The child was born at 7 o'clock A. M. About ten or fifteen minutes afterwards I caused slight traction on the cord to be made (as is my custom), but the placenta did not come away. I found there was considerable hemorrhage. In about fifteen minutes more I tried traction on the cord again, but without success. The feeling imparted to my hand, by the cord, was as if the placenta was held firm. The patient becoming faint the pillows were taken from beneath her head and I used traction again, with pressure over the lower part of the abdomen, but without effect. Faintness continuing, I administered ergot and laudanum. Pain soon came on at regular intervals, and continued for half an hour. During the time I tried traction again, but with no better success. When the specific effect of the ergot ceased, the patient slept awhile with less flowing, but she could not have her head raised without fainting. Gave ergot again; the pains came on and continued about the same length of time as before, but the placenta did not appear. It was now 10 o'clock A. M., and, hemorrhage continuing, I decided to introduce my hand into the cavity of the uterus. I did so, and found an hour-glass contraction of that organ, and the whole mass of the placenta above it. With my fingers I dilated the contraction, as gently as I could, siezed the placenta, which was loose, and removed it. The hemorrhage ceased at once. In the evening I visited her, and found that reaction had come on so as to threaten danger. In order not to mistake reaction after hemorrhage for inflammation, I gave her 8 grs. of Dover's powder, and ordered warm spirits to be kept upon the abdomen.

Dec. 18th. Patient had slept some with moisture of the skin; pulse 120; thirst; furred tongue; bowels very tender, with some pain; skin now hot,

with headache. These symptoms of inflammation existing, I gave her the solution of salts until free purging was produced, to be followed, at bed-time, by a Dover's powder.

19th. Symptoms of inflammation abating, particularly the soreness of the abdomen. Prescribed calomel and the antimonial powders through the day, and Dover's powder at night.

She took the solution of the salts again on the 20th, and also on the 22d, with calomel the intervening day. After the fifth day, the disease rapidly subsided, and was gone on the 8th from its incursion. Convalescence ensued in the course of the second week with the secretion of the milk and perfect restoration to health. The treatment in the second week was like that of the other cases already described. There was a slight mercurial effect in this case. *Quere.* Would the symptoms of inflammation have subsided, in this case, without the active treatment? At any rate she got well under free purging with salts and calomel.

Case V.—Mrs. G——, of Lunenberg, aged 23, was confined with her fifth child, a girl, on the evening of Dec. 18, 1844, after an easy and rapid labour. The child was born and the placenta had come away, with some flowing, before I arrived. She was very comfortable through the first week, as she had been with all her other children; was up and dressed and about her room after the third day, in spite of my repeated caution.

Dec. 25th. Seven days after her accouchement, I was called again in the night. Said she had been "quite smart" until that day; went out into the kitchen and took her meals with the family the day before, and also this morning. Before noon was taken with a severe headache, pain in the bowels, &c. She took, in the afternoon, a dose of castor oil, which had operated, but without bringing any relief. Her pulse was now 120 beats in a minute, strong and full; tongue coated with a white fur; severe pain and great tenderness of the abdomen; headache, and great pain in the back; cheeks flushed; skin hot; but little milk. Ordered fomentations of hops and spirits to the bowels, to be followed, in six hours, by one oz. of Epsom salts with magnesia, and ss. oz. of Epsom salts to be given every four hours until *ten* or *twelve* discharges from the bowels had been procured.

26th. The medicine had purged her thoroughly and with great relief. I need not describe the case further. The inflammation was subdued in six days, by similar treatment to that pursued in the other cases. Convalescence and restoration to health ensued in the course of the second week. The gums were very slightly affected by the calomel.

Of case 6th, (Feb. 26, 1845,) case 7th, (May 6, 1845,) case 8th, (June 10, 1845,) there is no need of a particular description, as they were so similar to the first case, though less severe. The treatment was the same as in that case, except that, as the inflammation yielded earlier, the calomel was omitted sooner, and none of its peculiar effects upon the glands were manifested. The results were the same as in the other cases.

Case IX.—Mrs. F——, aged 25, health good, was delivered of her second child, a boy weighing 10 pounds, on the morning of June 16, 1845, after an easy and rapid labour of three hours' continuance. She was supposed to have gone two weeks, at least, over nine months from conception. During the last four or five weeks of pregnancy, she was obliged to keep her bed, some of the time, each day, on account of great tenseness and ten-

lemess of varicose veins, which had extended over the whole surface of he abdomen, the right groin, and down the right leg. There was some welling of the ankles, particularly at night. She was very comfortable, ter her confinement, until the seventh day. The secretion of the milk ppeared on the day of her accouchement, and its flow was very abundant r the next six days. During this time her pulse never exceeded 72 beats a minute. Her bowels had been moved twice, once with castor oil, and nce with Seidlitz powders; her nourishment had been water gruel for the rst four days, to which, on the 5th and 6th, a little bread was added. The nseness and tenderness of the varicose veins had almost entirely ceased, nd I was congratulating myself on an escape from an attack of phlebitis, hich I had for some time feared, when suddenly, on the eve of the seventh ay from her confinement,

June 22d, having felt perfectly comfortable up to that moment, and was, fact, upon the point of sitting up in bed to take a cup of tea, she was ized with severe rigors ("terrible chills," she calls them to this day), so at her teeth chattered and the bed shook under her. I examined her ulse during the rigors and found just 72 beats in a minute, the same as in e forenoon and afternoon of that, and every previous day since her conement. She is of a calm, quiet temperament, not at all inclined to be rvous, and has had no apprehensions in regard to the result of her accouchement. The rigors lasted about 15 minutes. This state was followed r great heat, headache, pain in the limbs, quick pulse (120 in a minute) id restlessness. She had no pain in the bowels, nor was there any during e disease afterwards; no tenderness, except in a slight degree just above e pubis and in the right groin. No swelling of the abdomen at any time. the evening she took 2 grs. of calomel and 1 gr. of ipecacuanha in a ll, and another one at midnight.

23d, (*8th from confinement.*)—Passed a miserable night; pills had erated once; pulse 120, soft; tongue covered with a white coat; thirst rgent; lochia suppressed; milk almost entirely gone; pain in the head id back continues; no tenderness save above the pubis and in the groin, id that but slight. Took a full dose of salts and senna, which operated ely in the forenoon; and, during the afternoon and night, had calomel id the antimonial powders, once every four hours. In the afternoon after e commenced taking the powders, she sweat freely on the upper part of e body, arms, neck and face; but there was no moisture of the skin on e lower part of the body and lower extremities. This state continued ring the whole course of the disease.

24th, 9th day.—Took a Seidlitz powder this morning, which, with e calomel taken in the afternoon and night previous, operated six or seven nes during the day; pulse 120; not much restlessness; headache gone; cretion of the kidneys scanty and high-coloured; no milk; lochia entirely ppressed; some sleep by short naps in the night; skin moist as mentioned last record. She took no anodyne, as there was not much restlessness d had some sleep. Prescribed 2 grs. of calomel and 4 grs. of James' wder once in six hours only, as there was a tendency to run off by the wels.

25th, 10th day.—Symptoms much as yesterday. Continue calomel d James' powder through day and night.

26th, 11th day.—In the morning took one wineglassful of the solun of salts with magnesia, which operated four or five times through the y. From this time the pulse began to moderate in frequency.

27th, 12th day.—Pulse 108 and at night 100; rather less heat of the skin, and other symptoms the same. Took the antimonial powder without the calomel.

28th, 13th day.—Pulse 96; heat of the skin abating; thirst less; urine yet scanty; other symptoms the same. Took a wineglassful of the solution of salts with magnesia again, which operated three or four times during the day. In the night she sweat profusely on the upper part of the body, and a little, for the first time, on the lower part. Towards morning the pulse *suddenly* fell to 72, with some disturbance of the nervous system. The lochia also *suddenly* returned, and after two or three hours of quiet sleep she awoke late in the morning.

29th, 14th day.—Free from fever. At once the tendency of the groin increased and the right limb rapidly began to swell. The limb swelled a good deal, but was not very tender except on motion. There was no fever after this time.

30th, 15th day.—Patient began to take an infusion of chamomile and arrowroot for nourishment. The bowels were kept soluble by the infusion of senna, figs and ginger, every second day. The limb was bathed with volatile liniment and spirits. The secretion of milk began to return, and during the second week became abundant. At the end of the second week from the incursion of the disease, she could sit up most of the day. Began soon after to walk about with crutches and continued their use for two weeks, having the limb bandaged. As she began to get about, the swelling of the limb diminished, although it did not entirely subside until the end of four or five months. She did not suffer from mercurial sore mouth. Her health was perfectly restored and remains good to this time.

In concluding the foregoing relation, Dr. Field says: "You will perceive that I rely very much on early and thorough purging with calomel and salts. That it will have a decided good effect to control and subdue inflammation, I think there can be no question. The medicine operates without pain, and, under its use, the pain and tenderness of the bowels rapidly subside. If the inflammation does not decidedly yield within two or three days, I keep up the administration of the calomel in order that it may have its peculiar effect to resolve any remaining disease. If I was to volunteer a theory of the beneficial action of such treatment, I would say that, by the abundant serous discharges, it procures depletion from the organs affected, or from their near vicinity; prevents the effusion of coagulable lymph and thereby promotes resolution. If the inflammation continues beyond the fourth day, I think it safer for the patient that calomel should be pushed to the extent of affecting the gums, for then I feel assured that the dregs of the disease will be removed, and there will be less danger of a relapse. Neither have I found free purging, in this way, produce prostration of strength even in feeble persons. Of course this should be done in the outset of the disease. How it might do, if the disease had been allowed to run on for three or four days, unchecked, I cannot say. It might bring on a troublesome diarrhœa and prostration. As yet I have had no case in which the inflammation did not subside, if I could procure free catharsis, with salts, soon after the attack."

Note.—Some time since I prepared the following "Abstract of Cases of Midwifery," and distributed copies among many of the physicians of my acquaintance, with the hope that I should be able to collect an account of all the cases occurring in their practice. As yet I have received but few returns. Nevertheless, I do not yet despair of enlisting their hearty co-operation, and of being able, at some future day, to present a full account of all the cases of midwifery, yearly occurring, in the County of Worcester.

Abstract of cases of Midwifery kept by *of*

NUMBER OF CASES.	Mother.	Child.	Placenta.	Previous children.
	Age when married.	Presentation.	Minutes between birth of child and delivery of the placenta.	Whole No. previous children.
	Age when delivered.	Sex.	Placenta upon edge or mouth of uterus.	Whole No. males.
	Number of pregnancies.	Weight.	No. of placenta in twin cases.	Whole No. females.
	Number of hours in labour.	Length.	Force delivered.	Whole No. males now living.
	Flooding after 6 months, and before labour.	Insertion of the funis.		Whole No. females now living.
	Flooding during labour, and before delivery.	Diseased.		No. twins or triplets.
	Flooding between the birth of child and delivery of placenta.	Deformed.		Fully reported.
	Flooding after delivery of the placenta.	Illegitimate.		
	Convulsions.	Dead or alive, or dead and putrid.		
	Puerperal fever.	Died during the 1st month.		
		Delivered at what month of pregnancy.		
		Year, month, and day of birth.		
		Hour of birth.		
		Interval between twins.		
		Force delivered.		

10. *Presentations.*—Of the 932 children, subject of the present analysis, the presentation was determined in 912 instances. In the remaining number the child was either born before the arrival of the accoucheur, or, if the presentation was determined, was not made a matter of notation in the "abstract." The different presentations are collected in the following table, and which is to be read thus: 874 were presentations of the vertex, and so on.

Presentations of 912 cases.

Presentation.	Vertex.	Breech.	Feet.	Foot and knee.	Knees.	Face.	Face to pubis.	Placenta.	Funis.	Unknown.
Number of each,	874	13	9	1	1	2	8	1	3	20

In order to make the comparison with greater facility, the following table has been constructed, showing the ratio of the different presentations in 100 cases. The table is to be read thus: 95·8 per cent. were presentations of the vertex, and so on.

Ratio of presentations in 100 cases.

Presentation.	Vertex.	Breech.	Feet.	Foot and knee.	Knees.	Face.	Face to pubis.	Placenta.	Funis.
Ratio,	95·8	1·4	·9	·1	·1	·2	·8	·1	·3

The following table is constructed to exhibit the ratios of the presentations in 1000 cases; the *first* line, the presentations in cases which were completed *within* 48 hours; the *second*, the presentations in cases protracted *beyond* 48 hours. The table, is to be read thus: in every 1000 cases completed within 48 hours, the vertex presented 964 times, and so on; in every 1000 cases protracted beyond 48 hours, the vertex presented 696 times, and so on.

Ratio of presentations in 1000 cases, under and over 48 hours.

Presentation.	Vertex.	Breech.	One foot.	Both feet.	Foot and knee.	Knees.	Face.	Face to pubis.	Placenta.	Funis.
Under 48 hours,	964	12		7	1	1	1	7	1	3
Over 48 hours,	696	87	43	87			43	43		

From this table we see that there is a much larger proportion of presentations, other than the vertex, in those cases which are protracted *beyond* than in those which are completed *within* forty-eight hours from the commencement of labour. Will not this fact aid in the solution of the problem whether the protracted labour is not, in some measure, to be accounted fo

by the unusual presentation of the child? That the ratio of the presentations of the breech, one foot, both feet, face, and face to the pubis, in those labours protracted beyond forty-eight hours, should be so greatly increased beyond that which obtains in cases which are completed within that period, cannot, I think, be regarded as accidental or fortuitous.

Of the *breech* presentations, three were included in the statistical article before referred to, leaving eleven for the cases occurring since its publication. The following table exhibits a condensed analysis of them.

Analysis of 11 *breech presentations.*

No. of case.	Age when married.	Present age.	Number of pregnancy.	Length of labour.	Sex.	Weight.	Alive or dead.	Full time or not.
1	20	27	4	10 hrs.	F.	4½ lbs.	A.	9 mos.
2	26	29	1	12	M.	6	A.	9
3	18	40	11	6	F.	9½	A.	9
4	23	35	4	12	F.	8	A.	9
5	21	26	3	17	F.	7	D.	9
6	17	30	5	15	M.	8½	A.	9
7	23	29	2	50	F.	7	A.	9
8	20	21	1	24	F.	6½	D.	9
9	30	33	1	12	M.	7½	A.	9
10	21	24	1	6	F.	4	D.	7
11	19	26	3	30	F.	8	A.	9

Of the foregoing cases, No. 1 was a case of twins. The first child was born with the vertex presenting, weighed five pounds and a half, and died during the first month. The interval between the birth of the two children was fifteen minutes. Nos. 5, 8, and 10, where the children were still-born, were attended by no unusual circumstance, except that No. 10 was a miscarriage. The children had been some time dead, as evidenced by the fact that, in many places, the cuticle could be easily detached.

The *knees* presentation occurred in the first pregnancy of a woman, aged 22, after a labour of eighteen hours. It was an abortion in the sixth month of pregnancy, the child, a boy, weighing two pounds and three-quarters, and still-born.

Of the nine presentations with *both feet*, three were disposed of in the article before-mentioned, leaving six to be analyzed in the present communication, as may be seen by the following table.

Analysis of 6 *cases of presentation with both feet.*

No. of cases.	Age when married.	Present age.	Number of pregnancy.	Hours in labour.	Sex.	Weight.	Alive, dead, or dead putrid.	Full time or not.
1	14	35	12	70	M.	6	D. p.	9
2	19	24	2	7	M.	7	A.	9
3	21	22	1	17	F.	3	D.	9
4	36	37	1	5	M.	1	D.	5
5	22	27	2	36	F.	7	A.	9
6	28	33	3	10	M.	7	A.	9

In the foregoing table, No. 3 was set down in the "abstract" as "diseased" and "deformed," being acephalous. It occurred in the practice of one of my correspondents, and I am unable to give any further account of the fœtus. No. 5, as will be seen, was born at the fifth month, and weighed but one pound. By a reference to the "abstract," I find there was flooding in the early stage of pregnancy; and, probably, the small weight of the fœtus, as well as the premature labour, is attributable to this fact.

The *foot and knee* presentation was included in the article heretofore mentioned.

The two *face* presentations occurred, the one before my former report, and the other was furnished by a correspondent without note or comment.

The eight *face to the pubis* presentations are returned without remark, except in three cases. One, a female, born after a lingering labour of forty hours, weighing nine pounds and a quarter; another was the last born of a pair of twins, a male, weighing seven pounds and three quarters; and the third was a female, weighing eight pounds. The last two were ninth pregnancies. Mothers and children all did well.

The *placental* presentation occurred in a case of abortion, and has been already reported.

Of the three cases of presentation of the *funis*, two have been disposed of in a former article; of the other, I find no remark except that the vertex next came down, and that the child was dead at birth.

The presentation with *one foot* was suffered to go on without endeavouring to bring down the other foot. The labour progressed rapidly and terminated favourably both for the mother and child. Need much importance be attached to the advice, to search for and bring down the other foot?

11. *Sex.*—Of the 932 children born, their sex was noted in 918 instances; and the proportion to each other was as follows, viz:—

Sex of 918 children.

Males, 477.	Females, 441.
Males, 52 per cent.	Females, 48 per cent.

12. *Weight of children.*—Of the 932 children, their weight was ascertained in 836 instances. The following table is to be read thus: one child weighed one pound, and was a male; four weighed two pounds each, two of whom were males and two were females, and so on.

Weight and sex of 836 children.

Weight in lbs.,	1	2	3	4	5	6	7	8	9	10	11	12
No. of children,	1	4	4	3	3	29	141	260	244	108	38	1
No. of males,	1	2	3	1	2	10	55	112	132	70	30	1
No. of females,		2	1	2	1	19	86	148	112	38	8	

The whole number of children, 836, whose weight was ascertained, weighed 6960 pounds, averaging eight pounds five ounces and a fraction, each. The whole number of males, 429, whose weight was ascertained,

weighed 3695 pounds, averaging eight pounds and ten ounces, each; while the whole number of females, whose weight was ascertained, being 407 in number, weighed 3265 pounds, averaging eight pounds, each.

13. *Length of the children.*—Of the 932 children, 242 were measured at birth, and their average length was found to be nineteen inches and a quarter, with but a fractional difference between the males and the females, the males being the longest.

14. *Insertion of the funis.*—Of the 932 children, the insertion of the funis was noted in 242 instances. The funis was inserted in the centre of the body of the child 209 times out of the 242, who were examined for that purpose. The insertion of the funis in the centre of the body is accounted *one* of the evidences of the delivery of the child at the full time; and, consequently, may be used in the settlement of any medico-legal question admitting its applicability. Alone, it cannot be a test of much value; but may be used as corroborative of other and stronger evidence.

15. *Diseased.*—Of the 932 children six were born diseased, viz.: two had spina bifida, one was acephalous, and three were marked "diseased," but no particulars noted.

The acephalous case occurred in the practice of Dr. Southwick, already mentioned as my friend and correspondent, and is returned without remark: as are also the three others marked "diseased." One case of spina bifida was related in the article heretofore published in this journal. The other, happening in my own practice, is as follows, viz.:—

Mrs. A——— was delivered of her first child June 21st, 1839, after a labour of thirty hours. On examining the child, which was a male, a tumour was discovered over the second dorsal vertebræ, about the size of a quarter of a dollar. The tumour was flat, and raised about one quarter of an inch above the surrounding skin. The covering of the tumour seemed to consist entirely of cuticle, and the tumour itself was filled with a transparent fluid, seen to be so through the extremely attenuated covering. Around the base of the tumour was a vigorous growth of hair.

From this time until its decease, Feb. 24, 1840, the child continued to grow, and was as little troublesome as children in general. For the first few days after its birth, a thin transparent fluid was discharged from the tumour, apparently by the process of transudation. The growth of the tumour increased with the growth of the child, and, at its death, was as large as a small orange—that is, about two inches in diameter, and of an oval shape. The lower limbs, it was thought, did not grow in proportion to the rest of the body. They were, at times, partially paralytic, the right limb more so than the left one.

For some weeks before its death, it had occasional paroxysms of laborious respiration, making quite a loud and distressing noise during inspiration. It did not seem to be in pain, at these periods, but after a while, would become quite exhausted by the exertion. I attributed these paroxysms to a loss of power in some of the muscles of respiration, owing to a diminished supply of nervous influence. There was something unnatural about the eyes; the outer angle was considerably raised above the inner one, and the eyeballs exhibited an uncommon degree of mobility. The countenance, in

its tout ensemble, strongly reminded one of those Chinese portraits we often see on fans and other articles of oriental manufacture. It was a common remark of visitors that the countenance betrayed the evidence of idiocy. Of this, however, I did not feel so certain.

The tumour again began to discharge some seven or eight days before death; portions of it became affected with superficial ulceration, and were soon covered with a crop of fungous granulations. The discharge, as at first, seemed to be only the simple exudation of a thin transparent fluid, no opening could be discovered upon the closest inspection. The discharge was small in quantity, so that a change of the compress, once or twice a day was amply sufficient for its absorption. After a day or two of more than common uneasiness, though without any thing particularly noticeable by the parents, on the morning of the 24th of February, the patient was attacked with a severe paroxysm of the laborious respiration. This was repeated with short intermissions frequently through the day; the patient becoming more and more exhausted, the paralytic affection of the lower limbs more profound, and followed before death by a palsy of the left arm. The little patient became comatose at sunset, and died at 10 o'clock of the same evening.

Autopsy, forty hours after death.—Whole surface œdematous, readily pitting upon pressure; tumour flaccid, containing but little fluid; surrounded by an unnatural growth of hair; on dissecting out the tumour, found it to be cellular, two large cells on each side of the median line and several smaller ones, each communicating with the other. The spinous process, as well as the whole posterior portion of the body of the second dorsal vertebræ, was wanting. There was a notch also in the adjoining superior and inferior vertebra, making the opening into the spinal canal one inch and a quarter long by three-quarters of an inch wide at its widest part. A small quantity of serous fluid escaped upon cutting into the sac during the dissection. Pressure upon the head would drive out the fluid at the opening in the spine.

The head was next examined. Upon removing the scalp, the bones of the cranium were found in many places to be deficient in ossification, though covered by the pericranium; some of the spots where no ossification had taken place, were as large as a half dime. Upon inquiry, it was learned that the parents, during the life of the child, had noticed pulsations at these points synchronous with the beating at the fontanelles. The fontanelles were found unusually large. Upon attempting to remove the cranium it was found to be strongly adherent to the dura mater, much more so than in any case I had before witnessed. After considerable dissection with the handle as well as the edge of the knife, the skull was removed, though not without evacuating one of the ventricles by an unlucky slip of the knife. The vessels, either of the dura or pia mater, were not unusually turgid, neither was any spot discovered where the capillary vessels were injected. The brain was now carefully sliced away until the lateral ventricles were exposed. These were found partially evacuated of their contents, one being opened by the removal of the cranium. They were estimated to have contained, when full, six ounces of fluid. The opening between them was three-quarters of an inch in diameter, its shape being a little oval. All the ventricles of the brain were found to be much enlarged and filled with an opaline-coloured serous fluid. Immediately over the central point of the cerebellum, and in contact with it, was an encysted tumour three-quarters of an inch in diameter, filled with a perfectly transparent

fluid. This tumour seemed to have no connection except with the cerebrum, from which it was readily detached by the handle of the knife, and removed without rupture of the cyst. The cerebellum was very much raised at its central point, displaying quite a cone-like appearance. Upon removing the cerebellum a probe could be readily passed from the cranium to the opening in the spine, at the seat of the external tumour.

During the whole dissection very little traces either of recent or of former inflammation were discovered.

16. *Deformed.*—Of the 932 children, the subject of the present communication, six were noted as deformed. Two of these cases were contained in my former article, and two were returned by my correspondents without remark. Of the remaining two, one was a case of talipes varus of both feet. The child lived but a few weeks. Of the other, the following account is extracted from a paper published in the Boston Medical and Surgical Journal, for July 10, 1839:

Mrs. ———, after a day or two of more than usual hard work, was attacked with severe abdominal pains, soon followed by a slight uterine hemorrhage. These symptoms continued through the succeeding night without abatement, the pains being so constant as to allow but little, if any sleep. At half past 9 A.M., on the following morning, I was called to visit her. On my arrival I found her walking about the chamber, and apparently in strong labour pains. She supposed herself between six and seven months advanced in pregnancy. She has never suffered abortion, usually enjoys good health, and is the mother of two fine children. I advised her to go immediately to bed, hoping, peradventure, the premature delivery might be avoided. Complying with my advice, examination was then made, and the head, with the vertex presenting, was found resting upon the external organs. The hemorrhage was slight and the membranes were not ruptured. All hope of escaping the threatened miscarriage was now abandoned, and the customary preparations were directed to be made for the approaching delirery. The pains continued to grow stronger and more frequently recurrent, until 10 o'clock A.M., when the membranes were ruptured, and an *extraordinary* flow of water followed. A few more uterine efforts accomplished the delivery.

The child was still-born, exhibiting no signs of life, except a few, feeble, convulsive motions of the extremities, which soon ceased. On examination of the child it was found to be deformed as follows: The hand, if such it could be called, consisted only of a thumb and forefinger; the other fingers with their corresponding me-

tacarpel and carpel bones being absent. The thumb and finger well formed, and the nails perfectly developed. On examination of the forearm, the ulna was also found to be wanting; so that the forearm and hand, in their osseous organization, consisted only of the radius, the ossa scaphoides, trapezium, and trapezoides, the metacarpal bones of the thumb and index, together with their respective phalanges. The forearms were bent upwards towards the humerus and could not be straightened; being apparently held in that position, by a rigid contraction of the skin and muscles, at the flexure of the elbow joint.

The organs of generation presented the following mal-formation. A little fullness of the skin upon and below the pubis constituted what may be termed the rudiment of a scrotum. The usual site of the penis was occupied by a membranous tubercle, about the size and shape of a large pea, attached by a base of about two thirds of its own diameter. At first, no orifice was discovered in the tubercle; but, on turning it up, upon its inferior surface and partly in its base, a small orifice was found which proved to be the opening of the urethra; as a probe, properly bent, passed readily through it into the bladder.

Referring the reader to an inspection of the accompanying sketch of the fœtus made at the time, further description will not be necessary.

The mother, on being informed that the child was deformed, immediately answered, "I expected it would it be; it has a *hare-lip*, I suppose." On being asked why she supposed it would be thus deformed, she said, an acquaintance of the family who had a hare-lip, had been at the house several times during her pregnancy, and that she invariably felt *very disagreeable* when he was present. Mothers frequently trouble themselves about some anticipated deformity in their children, but I never knew their predictions verified, except in a single instance; a short account of which was contained in the statistical article before referred to, and published in this journal.

17. *Dead or alive, or dead and putrid.*—Of the 932 children born, 824 were alive, 20 were dead, 6 dead and putrid, and in 82, the fact was not noted. Of the 26 still-born, 22 were born in wedlock and 4 were illegitimate. Of this number, 17 were abortions and 9 were miscarriages.

18. *Died during the 1st month.*—Of the 824 children noted as being alive at birth (if the returns are correct) eight only died during the *first* month, which gives a proportion of 1 in 103. In the Dublin Lying-in Hospital, from November 1826 to November 1833, 16,654 children were born; and, during the time the mothers remained in the hospital (which, in most instances, was from eight to ten days after delivery) 284 died, which gives a proportion of 1 in 58. The difference in the mortality, which will be seen is very great, may be accounted for by the difference between hospital and private practice, and the social and physical condition of the two classes of patients. If, after removal from the hospital and before the close of the 1st month, all the deaths (for, undoubtedly, many occurred in that period) could have been ascertained, the difference would have been greatly increased.

19. *Delivery at what month of pregnancy.*—Of the 932 children born, the period of pregnancy was set down in 844 instances, as may be seen in

the following table, and which is to be read as follows, thus: one was born in the 2d month, and so on.

Month of pregnancy of 844 deliveries.

Month,	2	3	4	5	7	8	9	9½	10
No. of deliveries,	1	9	4	3	9	13	794	9	2

Adopting the rule that births *before the sixth month* should be termed *abortions*, and those occurring *after that period and before the full time*, miscarriages, the table gives seventeen as the number of abortions, and twenty-two as the number of miscarriages. *Quere.* Should not the eleven births procrastinated *beyond* the full time be called miscarriages as well as the twenty-two which occurred within the two months *previous* to the full time? These cases were all returned by my correspondents without note or comment, so that I have no knowledge of the evidence upon which the opinion was based that they were thus procrastinated. Of the abortions returned by them neither have I any account. Of those occurring in my own practice two only will be commented on, as, in the others, nothing worthy of remark was noticed.

The following account of them is the substance of two communications read before the Union Medical Association.*

Case I.—At 4 P. M. I was called to see Mrs. P. W., aged 23, married, and the mother of two children. From the patient and her mother I received the following history of the case: Day before yesterday, to wit, on Friday, the patient, while sitting by the fire, was suddenly seized with profuse flooding, and abortion soon followed. She was, as she averred, near the end of the third month of gestation. She went upon the bed at this time and has not been up since. She had but little rest the succeeding night, and yesterday was more unwell; a severe headache, very intense through the temples, coming on early in the morning, succeeded by a flushed face and hot and dry skin. The tongue was furred, she had no appetite and was very thirsty. This day, before my arrival, she had taken a cathartic of magnes. sulph., which had operated well, procuring five or six dejections.

Sunday, Feb. 3d, 1839.—She is now suffering severely from headache, especially in the temples; tongue furred, white at the edges, brown and dry in the middle; skin dry and hot; abdomen moderately full and a little tender over the pubic region; urine scanty and high-coloured; posture dorsal; countenance contracted and anxious; manner despondent and pulse 120 beats in a minute, full and hard. R. Venesection ℥fl. xii. Ant. tart. sol. once in three hours. Salts and senna, to-morrow morning to free catharsis. Cool drinks ad libitum. Keep room cool.

Monday 4th, 12 *A. M.*—Cathartic has operated well, inducing five full dejections; headache somewhat less severe; tongue less coated; urine

* A voluntary association in this neighbourhood, organized, May 12, 1834. It is composed of eight or ten members. Its sessions are holden monthly, at which some one reads a dissertation and the others contribute cases or papers on medical subjects. The remaining time of the session is occupied by *friendly* but *unrestricted* criticism.

somewhat increased in quantity, but still high-coloured; other symptoms remain the same. R. Ant. tart. sol. at six and twelve o'clock through the day. Ipecac. infus. at nine and three o'clock. Spts. nit. dul. pro re nata. Sinapisms to feet. Cold water to head. Drinks and room the same.

Wednesday 6th, 10 *A. M.*—Found my patient this day much relieved from the pain in the head, but quite deaf; bowels freely open, probably from the antimony and ipecacuanha; less tenderness over the uterine region and at the epigastrium; urine more scanty again and higher-coloured; pulse 110, full but not hard; skin dry, shrivelled and hot; lochial discharge stopped; some delirium last night; pupils contracted and vacant; tongue white and moist; thirst less; abdomen not full and less tender; decubitus dorsal and sliding; countenance anxious and desponding. R. Salts and senna, to be taken immediately. Calomel and James' powders at six and twelve o'clock. Ipecac. infus. at nine and three o'clock. Spts. nit. dul. pro re nata. Pil. opii comp. after four free dejections. Room cool and perfect rest.

Friday 8th, 4 *P. M.*—Found the patient, at this record, apparently much better. Salts and senna had operated well, and after four dejections, by the aid of the pill, she had rested well on Wednesday night; abdomen was but little tender. Thursday night was again delirious, talking in her sleep; in the afternoon had two or three full dejections, but, taking a pill, as before, the bowels have since been quiet. After this had some appetite, and eat some few mouthfuls of wheat bread toast. The pulse is now 100 beats in a minute, full and soft; some perspiration about neck and shoulders; urine scanty and high coloured; tongue coated, white at edges and brown in the middle; some thirst, especially for cold drinks. R. Cal. and James' powders at six and twelve o'clock. Ipecac. infus. at nine and three o'clock. Spts. nit. dul. pro re nata. Sinapism to pubic region. Room and drinks cool.

Sunday 10th, 4 *P. M.*—Passed the night after the last record very badly; was delirious; very restless; had more fever; more thirst; three dejections; skin hot and husky; tongue more furred. On Saturday morning had epistaxis; grew worse through the day; at night was restless and delirious; very thirsty; no sleep. Has grown worse to-day, since morning; has become quite helpless; is somewhat comatose and has a muttering delirium; at times restless; skin hot, dry and harsh to the feel; is very thirsty; respiration much accelerated; pulse 120, full and hard; abdomen more tumid; tenderness increased over the uterine and epigastric regions; pain darting down the lower extremities quite to the heels and very acute; back burning and painful; tongue brown and cracked; has had no fulness of the breasts nor any lochial discharge since the 6th.

R. Venesection ℥fl. xii. Calomel and jalap, followed by salts and senna. Epispastic six by six to the uterine region. James' powders and calomel, one in six hours. Continued rest as before.

Monday, 11th, 10 *A. M.*—Cathartic did not operate until after one enema, nor then until one o'clock A. M., this morning; had five dejections and then took a pill of opium, soap and camphor; respiration hurried and occasionally sighing; abdomen not full, but tender upon moderate pressure, just above the pubis; has great thirst; skin hot and dry; tongue brown and cracked in the middle, edges dark red; no secretion from salivary glands or the kidneys; delirium continually present; pulse 130 and small; some cough but dry; eyes closed; pupils contracted; lips brown

sod dry; blister beginning to fill. R. Calomel 1 gr. at six and twelve o'clock. James' powder 3 grs. at nine and three o'clock. Spts. nit. dul. pro re nata. Room and drinks cool.

5 *P. M.*—Patient evidently sinking, no improvement in any of the symptoms; blister filled well and has been twice dressed with cabbage leaves; some vaginal discharge since morning, dark coloured, grumous and fetid; abdomen more full and tense; coma more profound and constant; pulse 140, very small and occasionally intermittent.

I now learned, for the first time, that on Friday preceding my first visit, the patient had pushed a common *knitting needle* forcibly up the vagina, with the intention of procuring the abortion. Great pain immediately followed, succeeded, in twenty-five or thirty minutes, by the hemorrhage, and, in five or six hours, by the abortion. She confessed having attempted the same operation one week before, but did not succeed. This was related by the mother-in-law of the patient, who lived in the same house with her; and, as the patient was now unable to hold conversation, nothing further could be elicited. R. Epispastic six by three to nape of the neck. Continue as at last visit.

Tuesday 12th, 10 *A. M.*—Met my friend, Dr. Wilder, in consultation. No dejection since yesterday at sunrise; some perspiration this morning about the face and neck; respiration hurried, the inspiration being spasmodic; is profoundly comatose; has urinated once since last record, urine very high-coloured; face pallid; tongue brown, cracked, dry and occasionally bleeding; bowels rather full but not tympanitic; borborygmi; bloody serum oozing from the angles of the eyes; mucus about fauces and throat gives much trouble, cannot expectorate it; blister on neck but little filled; pulse 130, small and frequently intermittent. R. Continue as yesterday with the addition of small doses of sulphate of magnesia.

5 *P. M.*—Patient moribund and died at 10 o'clock P. M. in the same evening. A post-mortem examination, though urgently requested, was obstinately refused.

Case II.—On Tuesday, March 29, 1842, I was called, at 9 o'clock P. M., to visit a patient, a widow, said to have been attacked with a sudden and alarming uterine hemorrhage, which, on my arrival, I found to be the case. On inquiry, I learned there had been a moderate hemorrhage since Sunday morning last, until a short time before I was called, when, on going to the vessel to urinate, something like half a pint of blood passed off at once, and the patient took her bed in great alarm. Examining the cloths I found the hemorrhage still going on, attended by severe intermittent pains, like those of a woman in labour.

Prescribing a strong dose of laudanum, I then asked for an explanation of the symptoms. After a short pause the patient confessed that she believed herself pregnant, and that she had arrived at the third month of utero-gestation. Finding herself in this unfortunate predicament, she had, from the first disappearance of the menses, been continually taking or doing something to provoke abortion. To use her own expression, she had used a "basket full" of double tansy, and wound off by deep and frequent potations of savin tea. She had worked hard, used the warm bath frequently, exposed herself to "all weathers," taken repeated doses of drastic cathartics, and gone through a regular course of gymnastics, by jumping daily from the dinner table for weeks, but all to no purpose; her burden and her shame were not to be got rid of so easily.

Although, five weeks ago, these measures had induced a scanty hemorrhage, still she was not relieved. Driven now almost to despair, she made application to a physician in the neighbourhood for further aid. In justice to the profession, I should say that this physician had been expelled from the Massachusetts Medical Society, for a wilful disregard of its by-laws. The first prescription of the Dr., which was procured by the *cher amie* of the patient, consisted of a box of pills, of which three were to be taken at bed time and three in the morning. The only effect of this prescription was a powerful and long continued catharsis, which, not producing the desired effect, moved her to make a personal visit to the Dr. about four weeks ago.

At this time an instrument (from the description of the patient, a female catheter) was passed up the vagina, though without giving her any pain. The attempt to rupture the membranes (as I suppose was intended) did not succeed; a phial of drops, which tasted strongly of creosote, were then given to the patient, to be taken night and morning, and she was promised that, in a few days, she would get rid of all her difficulties. The few days were passed in great anxiety, but neither the instrument nor the drops produced any effect. A second visit was now paid to the Dr., eleven days previous to the present attack, and she again submitted herself to his manipulations. The use of the instrument, this time, gave her great pain, and was succeeded by the discharge of a colourless fluid, which continued to drizzle away, in small quantities, up to the irruption of the hemorrhage. From this time the external organs of generation have been tumid and painful, and, at this present time, are so much so, that a partial examination, per vaginam, gives the patient great pain. The vagina is much contracted so as not, readily, to admit the passage of a single finger. At the last visit the Dr. also gave her a second phial of drops, to be taken, in tea spoonful doses, morning and night. These drops put the patient in great pain, especially about the back and loins. The pains were intermittent and seemed like labour pains; and, as the patient had been the mother of five children, I think she may be considered as a competent judge. After taking them for a few days, she says, they made her *blind*, and, becoming alarmed, their further use was discontinued.

Having given such portions of the patient's confession as are materially relevant to a proper understanding of the case, I now proceed with its continued relation.

The dose of laudanum procured but little, if any, relief from the pain. The hemorrhage, not so profuse, however, as at first, still continued. Being called at this juncture to attend another case, I directed the attendant to repeat the dose of laudanum, with three grains of acetate of lead, should the hemorrhage continue profuse. On my return at 2 o'clock A. M., three hours afterwards, I found the patient very weak and faint but, for the last hour the hemorrhage had not been severe. As yet nothing had passed of so far as I could discover, which looked like fœtus or secundines.

From this time the hemorrhage was moderate and the patient soon rallied. The pains had abated somewhat of their severity, though they were still strong. There was a constant oozing of blood from the vulva. Through Wednesday and the following night the symptoms continued much the same, and the patient, having had a change of body linen and been removed to a fresh bed, was made quite comfortable.

Thursday, March 31st, was ushered in by a slight increase of the pain and hemorrhage. The patient, without waiting for advice, had this morn

ing, taken a strong dose of salts and senna, and which was now (11 o'clock A. M.) operating powerfully, and putting her in great pain. I immediately gave her 40 drops of laudanum and directed her to take some warm gruel. The dejections were soon checked and she became comfortable. At 3 P. M., I was again called in great haste, and on my arrival, was told that after three or four strong pains, something had come away different from anything which had yet been seen. On examination, I found in the vessel an organized substance, which, viewed in situ, preserved the form, generally, of the uterus. Its whole outer surface, except a small portion, was completely shaggy, the papillæ or flocculi being from half a line to a line in length. At the superior portion, corresponding to what I supposed to have been the surface of attachment to the uterus, it looked like the corresponding surface of a placenta, except that the colour was almost black. The smell of putrefaction was readily discernible, and some spots were plainly undergoing the process of decomposition. On further examination the mass was found to be a sac, about three inches long and one and a half inches in diameter, at its widest part; preserving, generally, the shape of a pear. The walls varied in thickness from one-eighth to one-sixteenth of an inch, except in those portions where decomposition had begun to take place, where they were much thinner. At its inferior end there was a slit or opening extending up about one-third of the way towards the top of the sac. On turning the sac inside out, the inner surface was found smooth and shining and of a dull lead colour. At the top three or four large vessels, some of them (to use that expression of universal comparison among anatomists) as large as a *crow quill*, stood somewhat prominently out from its surface, radiating from a common centre, and from which, on being squeezed, a jet of black blood was made to issue. I could not discover any rudiments of an umbilical cord, or anything which looked like a fœtus, neither had anything of the kind been seen since I was first called; and, supposing the patient to have told the truth (and I doubt not she did, as she still insists that she was pregnant) nothing had passed before. The substance under examination I supposed to be the remains of a placenta and its membranes; the outer one the shaggy chorion and the inner one the amnion. From this time the patient did well. The lochial discharge, as I termed it, continued in moderate quantity for seven or eight days; there was little soreness of the bowels, and the patient rapidly recovered.

Supposing this case had been made the subject of a judicial examination, and the question had been put, Was this woman pregnant? what should have been my answer?

In favour of the affirmation of pregnancy are the following reasons:

1. There was an acknowledgment of frequent previous sexual intercourse.

2. The patient had felt the nausea and other sensations usually attendant upon her former pregnancies.

3. There had been an enlargement of the mammæ and a deeper colour of the areolæ about the nipples, since the commencement of the reputed pregnancy.

4. There was a discharge of a colourless fluid after the last operation for procuring the abortion, for eleven days, up to the period of the hemorrhage.

5. There was thrown off from the uterus what had the appearance of a placenta and its membranes.

6. There was a discharge following their expulsion, for seven or eight days, and which was presumed to have been the lochial discharge.

7. The patient, who had been six times pregnant before, expressed no doubts of her present situation.

In favour of the negation of pregnancy are the following reasons:

1. No fœtus had been discovered by myself, and, if the patient told the truth, none had passed off when I was absent or before I was called.

2. There were no remains or rudiments of an umbilical cord attached to what I have called the placenta.

3. The mammæ were now flaccid and the areolæ pale.

That the fœtus had been expelled before I was called, or while I was absent, and concealed by the mother or the attendant, I do not believe, as the patient, in that case, having so strong a motive, would, in all probability, have denied the pregnancy, which she does not to this day. But if she was pregnant what became of the fœtus? Might it not have been destroyed by the process of decomposition and passed unnoticed among the numerous coagula at the time of the abortion? That it was thus disposed of I am inclined to believe. The patient, at most, could not be more than three months advanced in pregnancy; it was her belief that the ovum had been, for some time, dead, before the incursion of the hemorrhage; this, with what had been done to dislodge it, together with the flaccid state of the breasts, for some time before the flooding, seems to confirm the supposition of pregnancy. If this state of the case was true, the fœtus was not more than two inches long at the time of its death; little or no bone had been formed, and, after the rupture of the membranes, for eleven days preceding the hemorrhage, it was placed in very favourable circumstances for its rapid decomposition.

20. *Delivered in what month of the year.*—Of the 932 children, the months in which they were born were returned in 838 times, which may be seen by an inspection of the following table. As will be seen, the births were distributed, in pretty nearly equal proportions, among the different seasons of the year; proving that the common notion prevailing in this region, that there are more births in summer than the other seasons is not correct. The table is to be read thus: 84 children were born in January, 67 in February, and so on.

Months of the delivery of 838 children.

Months,	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
No. of Children,	84	67	85	60	71	57	75	73	80	57	66	73

The following table exhibits the distribution of the births among the different seasons of the year, as follows:

Seasons of the delivery of 838 children.

Seasons,	Spring.	Summer.	Autumn.	Winter.
No. of children,	206	205	203	224

Of the individual months, March furnished the largest number, 85; while the succeeding month, April, furnished but 50, the smallest number.

The question which was respectfully submitted to the Malthusians for solution, in a former communication to this journal, on the *infrequency* of births in the month of April, (the first day of which is emphatically the *moving-day* of the universal Yankee nation) yet remains unanswered.

21. *Delivered at what hour of the day.*—Of the 932 children, the hour of birth was noted in 844 instances, as may be seen by the following table. By it we learn that 440 labours were completed between midnight and mid-day, leaving 404 to be accomplished in the remaining half of the twenty-four hours. Between 6 o'clock P.M. and 6 o'clock A.M. 456 labours were completed, leaving 388 to be accomplished in the remaining portion of the twenty-four hours. The last collocation furnishes 68 more cases for the night than the day time, equal to 54 per cent. for the night and 46 per cent. for the day. By the hour, is intended that the deliveries were finished *nearer* that hour than any other. The results of the table corroborate the popular opinion, that more children are born in the night than the daytime. The table is to be read thus:—58 children were born at 1 A.M., 38 at 2 A.M., and so on.

Hours of the birth of 844 children.

Born A.M.,	1	2	3	4	5	6	7	8	9	10	11	12
No. of children,	58	38	44	36	49	25	34	30	29	42	34	20
Born P. M.,	1	2	3	4	5	6	7	8	9	10	11	12
No. of children,	30	34	32	47	27	29	30	33	35	36	45	26

22. *Twins.*—Of the 927 labours, five were cases of twins, thus increasing the number of children to 932. By the following table it will be seen that in four cases there were two placentas, one for each child; while in one case there was one placenta with two cords. No placenta was delivered until the birth of both children. The following table exhibits an analysis of these cases:

Analysis of 5 cases of twins.

No. of cases.	Age when married	Present age.	No. of Pregnancy.	Hours in labour	Presentation.	Full time or not	Sex.	Weight.	Alive or dead.	Died in first month.	Interval between births.	No. of placentas.
1	20	27	4	10	V.	9	F.	5½	A.	D.	15	2
					B.		F.	4½	A.			
2	24	36	5	4	V.	9	F.	7	A.		15	2
					V.		M.	6	A.			
3	24	40	7	24	V.	9	F.	7½	A.		15	1
					V.		F.	7½	A.			
4	17	37	9	22	V.	9	M.	7	A.		25	2
					F. to p.		M.	7½	A.			
5	28	36	2	12	V.	9	M.	6½	D.		30	2
					V.		F.	8½	A.			

The breech and the face to the pubis presentations occurred, in both instances, in second children. No difficulty was experienced in their delivery. The average weight of the children was 6½ lbs. The mothers all had rapid recoveries.

23. *Instrumental deliveries.*—Of the 932 children 5 were force delivered, viz.: 2 were delivered by the aid of the blunt hook after the operation of craniotomy; 1, by the help of the forceps; 1, by the lever, and 1, manner not returned. The following table exhibits the ratio of instrumental deliveries, occurring in the practice of different accouchers:

Ratio of instrumental deliveries by different accoucheurs.

Ac coucheurs and their residence.	Dr. Carus, Dresden.	Dr. Rilgen, Geissen.	Dr. Kluge, Berlin.	Drs. Minden and Merrem, Cologne.	Prof. Andrée, Breslau.	Naegele, Heidelberg.	Dr. Voigtel, Magdeburg.	Dr. Kastner, Breslau.	Dr. Siebold, Marburg.	Dr. Boer, Vienna.	Madame Boivin, Paris.	Dr. Merriman, London.	Dr. Bland, (West. Gen. Dis.,) London.	Dr. A. B. Granville, do. do.	Dr. Beatty, (New Hospital,) Dublin.	Dr. Clarke, (Dub. Hospital,) do.	Dr. Collins, do. do.	Dr. Metcalf, Mendon, Mass.
Ratio; 1 in every	13	9	15	12	35	28	5	36	9	96	193	98	158	80	99	162	114	187

One of the cases in which the operation of craniotomy was performed, was reported in the article formerly published in this journal. The following account of the other is condensed from a communication made to the Union Medical Association, before referred to.

Mrs. W. M——— was taken in labour with her first child, Saturday, Feb. 28, 1841, at 10 o'clock P.M. She is of small stature, and her age 36. Has been married eight years, and has always enjoyed good health up to the present time.

Sunday, March 1st. I was first called at daylight. Found the patient quite comfortable and sitting up, the pains being slight and recurring after long intervals. On inquiry, found the membranes had been ruptured before my arrival; only a small quantity of water followed the rupture. The patient being so comfortable, an examination, per vaginam, was delayed for about two hours; when, on introducing the finger, the head of the child was readily distinguished. The presenting part was easily raised by moderate pressure, and quite a flow of the liquor amnii followed. A few pains succeeded the examination and were found to partake but little of the expulsive character. From the first, I had noticed that the uterine tumour was more pointed and cone-like than any case I remembered of noticing before. Applying the hand to the abdominal parietes, the uterus seemed to be closely contracted about the child, and to stand up very much in the shape of a sugar-loaf. While making an examination soon after this, and, while raising the head upon the point of the finger, a noise,

like the escape of air, was distinctly recognized both by myself and the attendants. At the same time a fetid odour was perceived, which also was present during the remainder of the labour. I expressed my conviction that the child was dead; but the mother affirmed that, within a short period of time, she had plainly felt its motion, and she was not to be convinced that she was mistaken. Applying my hand to the abdominal tumour, for some minutes, I was satisfied that she had taken an occasional spasmodic action of the abdominal muscles or of the uterus, for the motions of the child.

From this time until 9 P. M. the pains continued very feeble, not occurring oftener than once in twenty-five or thirty minutes. The patient continued cheerful; sat up or laid down as suited her pleasure. From this time until *Monday, March* 2, at 1 A.M., the pains increased in power and frequency, though they were not, at any time, of a character to be called striving; nor did they recur oftener than once in eight or ten minutes. The head had now become fixed in the bony pelvis, the vertex being the presenting part, and the face turned towards the left sacro-iliac junction. From this time until 7 o'clock, P.M., the pains continued to decrease in force and frequency, and, by 8 o'clock, had entirely ceased.

Tuesday March 3*d*, at 3 A.M., concluded to administer a dose of ergot. Its specific operation was noted at about the expiration of twenty minutes; but the contractions it superinduced were not striving or expulsive. The effect lasted about fifteen minutes, during which time the pain was pretty constant, slight remissions only being noticed. There was now occasional vomiting; induced, as I suppose, by the distension of the stomach with drinks aided by the ergot. At 9 A.M. the urinary bladder, which had become quite distended, was thoroughly evacuated by the natural efforts of the patient.

Finding her now very comfortable, able to walk from one room to the other without assistance, and getting a refreshing nap now and then, I concluded to wait for further efforts of nature, hoping the process would yet be accomplished without my interference. At 3 P.M., being sixty-five hours from the commencement of the labour, I again administered another dose of ergot. This brought on a teasing pain of fifteen minutes' duration, but without producing any change in the position of the child's head.

Despairing of seeing the delivery accomplished without instrumental aid, I now proposed that counsel should be called in. Dr. Willard, of Uxbridge, was soon joined with me in the case. After an examination, per vaginam, and a review of the whole case, and considering the protracted length of labour, it was concluded to make one more trial with the ergot; and, in case of its failure to accomplish the object, to proceed at once to the instrumental delivery of the child. The ergot was again administered in an increased dose, but with no better success than before. After vainly attempting to accomplish our object with the lever and forceps, the child's head was opened, the brain evacuated, and the delivery completed by the aid of the blunt hook. The womb contracted readily and strongly upon the child, as it was slowly delivered; and, after waiting ten or fifteen minutes, the placenta followed without any difficulty. The operation lasted some twenty minutes, but without any considerable pain to the patient. But little flooding followed, and, after the exhibition of an anodyne, the patient was put comfortably in bed.

An examination of the child proved that it had been, for some time, dead; for the cuticle slipped easily off from any part of the body. Scattered about,

upon various portions of the surface, were quite a number of vesicles, filled with bloody serum, seated upon livid bases. The cadaverous fetor was also very sensible, so as to be readily distinguished in all the adjoining rooms.

Had labour pains of ordinary intensity been present in this case, I doubt not the delivery would have been completed without the resort to artificial means, and within the first twenty-four hours from its inception.

24. *Period between the delivery of the child and the expulsion of the placenta.*—The following table exhibits that period in 523 cases out of the 927 births, and is to be read thus: the placenta was expelled 166 times in 10 minutes, and so on.

Period between the birth of the Child and the expulsion of the Placenta.

Period,	10	15	20	25	30	35	40	45	50	60	1¼	2	2¼	3	9	24
No. of placentas,	166	272	29	17	13	3	7	2	1	3	2	3	2	1	1	1

No case of retention of the placenta was followed by any unfavourable termination of the labour. Those retained nine and twenty-four hours were returned by my correspondents without any remarks. I am aware that many physicians do not wait so long, as the shortest period set down in the above table, for the delivery of the placenta. I consider, however, that it is safer to wait a little while, so that the uterus may have time to contract upon the placenta, and thus render the patient less liable to hemorrhage after its expulsion. Of course, if the hemorrhage is urgent, after the delivery of the child, I do not wait so long as I otherwise should, but am governed by that circumstance when to interfere in the process.

25. *Placentas, force delivered.*—In 838 cases where the delivery of the placenta was noted, it was force delivered in six cases. Of these, one was delivered at the end of three hours without flooding; three, soon after the delivery of the child, on account of that accident, one of which was upon the edge of the os uteri, and two by reason of an hour-glass contraction. One of these last occurred in a patient forty-three years of age, in labour with her first child. After waiting some forty or forty-five minutes for the delivery of the after-birth, and finding, by external examination of the abdomen, that the uterus was irregularly contracted, and the hemorrhage increasing, I passed my hand through the vulva and os uteri, as far as the contraction, without much difficulty. Here I was stayed for some time, as the contraction was close and not readily disposed to yield. By degrees, however, the contraction was overcome; the placenta, lying loose, was readily grasped, and slowly and safely delivered. After the contraction was relaxed, I did not perceive that there was any disposition to its return again. The patient suffered considerable pain during the operation, and, towards its close, became quite faint and exhausted. The guarded exhibition of stimulants soon produced a moderate reaction; the patient rallied and was soon quite comfortable. No untoward accident afterwards occurred, during her recovery. The other case of hour-glass contraction was followed

by puerperal fever; not, probably, however, on that account, as the patient was living in a region where there was, at that time, an evidently epidemic tendency to that disease.

26. *Previous children.*—Of the 927 cases, the previous children which the mothers had given birth to was noted in 377 instances. The result of this inquiry is embodied in the following table.

Previous Children of 377 Mothers.

	Total.	Total dead.	Total living.
No. of children,	1176	287	889
No. of males,	662	186	476
No. of females,	514	101	413

It will be understood that the previous children were reckoned from the last accouchement. Of the males, 28 per cent. had died, while, of the females, only 19 per cent. had died, thus showing the mortality to be nine per cent. greater among males than females. Among the whole number of the previous children, 1176, there were ascertained to have been but a single pair of twins.

27. *Concluding Remarks.*—I am aware that the pages of the preceding communication contain little that is calculated to awaken the wonder or excite the curiosity of those who look into books, with the expectation of being startled into amazement, by the rhetorical embodiment of some bold speculation. The fire must be Promethean, or it kindles no emotion in those who fly with the wings of Icarus. "Includere gemmam in scyphis aureis," or truth, with all her efforts, gets but a sorry company of listeners. But once in an age, suppose some wonderful problem is solved, per saltum; still, progress, in the main, must be slow, plodding, and accomplished by degrees. For the mass of travellers, who are striving for advancement on the highway of knowledge, amongst all its astonishing inventions, the ingenuity of man has yet achieved no railroad conveyance for the body, and no telegraphic communication for the mind. The multitude, then, must content themselves with the *old* way, uninviting and rugged though it be. They must content themselves with storing up isolated and disjointed materials, without stopping to inquire who is to win the crown of immortality, by a philosophical induction from their fortunate arrangement and comparison.

In the present communication I have designed to collect and lay by for future use, a few facts connected with an important branch of our profession. Trusting that some good may be accomplished by the labour I have bestowed upon their arrangement, they are respectfully submitted for the consideration of those who are engaged in the practice of the obstetric art.

Mendon, June 1, 1847.