

## MIDWIFERY.

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## I.—PHYSIOLOGY.

**I. Position of the promontory of the sacrum as shown by frozen sections.**

Freeland Barbour (at the Edinburgh Obstetrical Society, June 22nd, 1898), giving an abstract of a paper, said he had found there was a very great difference in the height of the promontory of the sacrum above the symphysis pubis. He had made measurements of the pelvis in 18 frozen sections. The anatomical conjugate was found to vary from 3·8 to 5·6 inches. The obstetrical conjugate, the distance between the promontory and the nearest point of the symphysis, varied from 3·44 inches to 5·28 inches. This showed the available conjugate for obstetrical purposes. The difference between the anatomical and obstetrical conjugates varied from 1·5th inch to 2·5ths inch. In order to ascertain accurately the height of the promontory above the pubes, a line is drawn from the upper part of the symphysis horizontally backwards, another line is drawn perpendicularly down from the promontory of the sacrum till it meets the horizontal line, and the measurement of the perpendicular line gives the height of the promontory above the symphysis. There is great variability in this measurement, the promontory standing as high as 5 inches, and as low as 2·4 inches above the pubes, the average being 3·7 inches. If the horizontal line is carried backwards till it impinges on the posterior wall of the cavity, it is found in 12 out of 16 available sections to strike the second coccygeal vertebra, or a point below it. From this it is learned that the whole sacrum and a portion of the coccyx is above the level of the upper margin of the symphysis. Another item of interest is the angle formed at the symphysis by the meeting of the anatomical conjugate with the horizontal line. This angle varies from 33° to 65°, and gives what Barbour calls the "set of the brim." He also gave measurements of the horizontal distance of the promontory backwards from the sacrum. These varied from 2·0 inches to 4·0 inches, with an average of 2·64 inches.

**2. Frozen section of the first stage of labour.**

Lusk (*Brit. Med. Journ.*, June 11, 1898) describes several

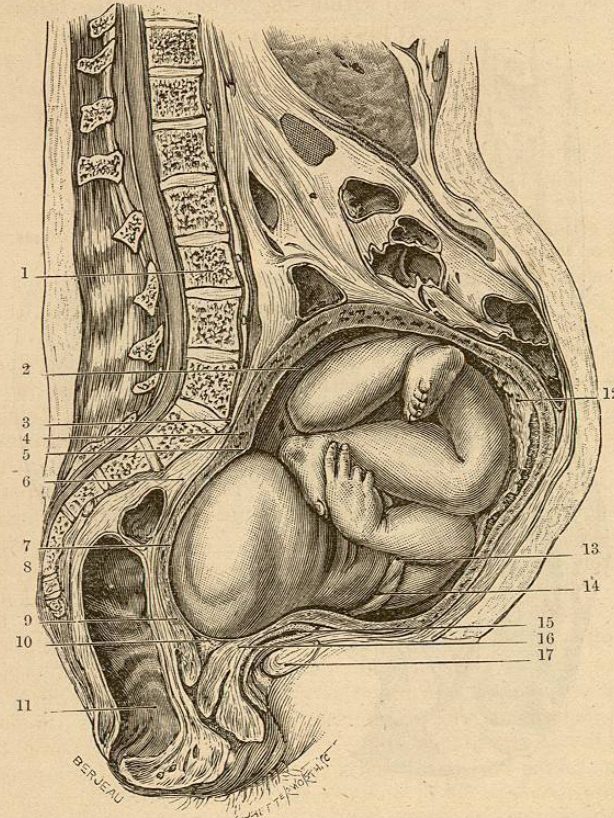


Fig. 1.—Frozen section of the first stage of labour (*Lusk*). (Quarter life size)

1, Third lumbar vertebra; 2, amniotic fluid; 3, retraction ring; 4, promontory of sacrum; 5, coronary vein (injected); 6, presacral pad of fat; 7, amniotic fluid; 8, fifth sacral vertebra; 9, *cul-de-sac* of Douglas; 10, membranes; 11, rectum distended with feces; 12, symphysis pubis; 13, uterovesical peritoneum; 14, bladder (slightly opened up); 15, umbilical cord; 16, outer canthus of right eye; 17, placenta.

plates representing a frozen section of a multipara who died suddenly during the first stage of labour, and two of them are reproduced here (Figs. 1, 2).

He remarks that two conditions of particular interest are found—one, the presence of but a small amount of amniotic fluid (90 c.cm. or 5.5 cm.) within the ovum, and the other, the

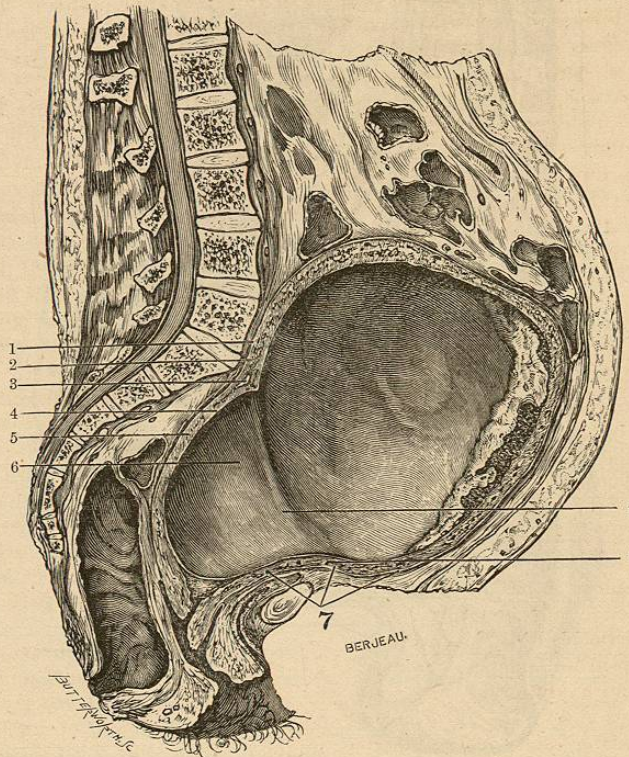


Fig. 2.—Frozen section of the first stage of labour (*Lusk*). (Quarter life size).

1, Retraction ring; 2, promontory of sacrum; 3, coronary vein (injected); 4, height to which membranes detached posteriorly; 5, impression of left ear; 6, impression of umbilical cord; 7, approximate location of three collapsed coronary sinuses; 8, height to which membranes detached anteriorly; 9, left limit of bulging.

considerable encroachment by the soft parts upon the size of the inlet. As a result of the former, the contained fetus is subjected to unusual influences of pressure and counter-pressure from the surrounding structures. That the latter condition has here in effect converted this sizeable pelvis into a moderate justo-minor

seems unquestionable in the presence of certain supporting evidences. The uterus presents features characteristic of the contracted state. Its shape is globular, and the greatest transverse and antero-posterior diameters approximate equality. That the former diameter is narrowed to a minimum is evidenced by the close embrace of the fetus laterally by the uterine walls.

### 3. The sagittal fontanelle.

Arnold Lea, at the Obstetrical Society of London, on July 6th, 1898, read a paper on the Sagittal Fontanelle in the heads of children at birth. He stated that abnormal fontanelles had been known to be present in the head of the fetus at birth for many years. Several of these membranous spaces had been described (nasofrontal, cerebellar, medio-frontal, sagittal), of which the most interesting to obstetricians was the sagittal fontanelle, first described by Gerdy in 1837. Lea's observations were based upon the examination of 500 consecutive cases at birth. The sagittal fontanelle was situated 2 cm. in front of the posterior fontanelle, on a transverse line drawn between the two parietal eminences. Its average length was  $1\frac{1}{2}$  cm. and width 1 cm. It might form a space as large as the anterior fontanelle, or it might be developed on one side only. The edges of the membranous space were usually formed of well-developed bone, but at times there was deficient ossification of the posterior part of the parietal bones. He had found the membranous space present in 4.4 per cent. of his cases; he had not included those in which there was only a notch in the parietal bones. The fontanelle was bilateral in 17 cases and unilateral in 5; in 4 instances it extended up to the parietal eminence on each side.

Herman, in discussing the paper, indicated two practical points which arose from it; the first was that a sagittal fontanelle might mislead anyone who diagnosed the fetal position by feeling the sutures and fontanelles; the second was that a sagittal fontanelle, indicating backward ossification, might invite a trial with forceps in a case which, with a very hard head, would call for perforation.

### 4. Labour in mature primiparæ.

De Koninck (*Revue Médicale*, Louvain, Oct. 30, 1897) has compiled an instructive memoir on labour in primiparæ married for some years and relatively mature. He gives 30 as the earliest year coming under "maturity," the "*primiparæ agées*" of French authorities. He sets aside as curiosities certain cases of primiparæ almost "aged" in the English sense of the term, such as Cohnstein's two women aged 50 and Steinmann's woman aged 52. It appears that in a genuine uncomplicated case of delayed impregnation the advent of catamenia is always found

to have occurred late in youth. Out of 401 such cases menstruation was retarded till 20 in 39 cases, till 24 in 4, and till 26 in 1. As to the retarded first pregnancy, abortion, ectopic gestation, twins, and special renal mischief are relatively frequent. Above all, lingering labour is specially common, statistics even exceeding guesses and *a priori* reasoning in this respect. In 12 out of 17 noted by De Koninck, labour lasted from 40 to 50 hours, the remaining labours being yet longer; one exceeded 90 hours. Feebleness of uterine contraction is absolute from first to last, and independent of any obstetrical combination. They also cause far more physical and mental exhaustion than the vigorous contractions of a young uterus, and at the same time are more painful. There are discrepancies in the "pains" seen in mature primiparæ of the same age, probably homologous with the great variations in the age of menopause observed in otherwise normal women. The uterus may be older in one woman aged 35 than in another of the same age. The forceps and other obstetrical operations are often required in the mature. Most of the above facts are easily explained. The excess of male infants borne by mature primiparæ (30 per cent.) is a less explicable phenomenon. Hecker considers the predominance of male infants as a speciality of all primiparæ, but Rumpe turns attention to the fact that in a family of children the predominance of males is commoner the further the mother is from her first menstrual period.

II.—PATHOLOGY.

1. Pregnancy complicated by chorea.

W. R. Dakin (*Practitioner*, Dec., 1897) writes on this subject, and gives detailed notes of seven such cases which have been under his care, with one in which the presence or absence of pregnancy was not ascertained.

He says that chorea is much more common in adult women who are pregnant than in those who are not, but he does not think that chorea is so fatal a disease in pregnant as compared with unimpregnated women as has been supposed, though it is a much more fatal complaint in pregnant women than in children. The general impression conveyed by his cases goes to confirm what is usually believed as to the greater frequency of chorea in first pregnancies than in later ones, and also as to the influence a former attack of chorea or of acute rheumatism has in producing a liability to these spasms in the first pregnancy succeeding such an illness. Six cases are in women under twenty-five. The moment of appearance of the spasms in each case was some time during the first six months of pregnancy. None of the cases

DR. DAKIN'S CASES OF CHOREA IN WOMEN.

No.	Age and civil state.	Parity.	Assigned cause.	Date of pregnancy.	Previous medical history.	Character of spasms. Heart.	Mania.	Treatment.			Result to patient.	Temperature.	Post-mortem.
								Nature.	Result to chorea.	Result to mania.			
1	22. m.	2-para	—	3rd month	Scarlatina at 9 years, no acute rheumatism. Choreia at 17 years	Began in R. side, became universal, severe. Bruit	Shortly before death	Induction in 4th day (CHCl <sub>3</sub> )	None	None	105°-98° 4 hrs. before death	Beard-like vegetations on mitral valves, cloudy swelling of organs	
2	23. m.	1-gravida	—	4½ months	Chorea at 17 years	General, severe. No bruit	On 4th day of chorea	Induction CHCl <sub>3</sub>	Spasms diminished	Ceased	102°-98° 4 hrs. & 100° at death	Adherent pericardium, subpericardial ecchymoses. Vegetations on mitral valve. Swelling of organs.	
3	18. s.	1-gravida	Fright	6th week	Acute rheumatism at 18 months, no chorea	Began in L. side, became general; severe. Bruit	3 days after induction	Induction CHCl <sub>3</sub> Morphia	Rapidly ceased	Hyoscine completely quieted her morphia	99°-88° on 4th day	—	
4	23. m.	1-gravida	—	6th month	No illness	Severe, general. Bruit	On admission; returned slightly on 4th day	Induction CHCl <sub>3</sub> Morphia	Ceased in a few days	Ceased	Normal	—	
5	33. s.	1-gravida	—	6th month	Acute rheumatism and chorea at 15	Right arm and leg only; mild. Bruit	1 month after chorea began; returned 2nd day after delivery	Induction CHCl <sub>3</sub>	Ceased gradually	Ceased	99°-88° on 3rd and 8th day after delivery	—	
6	23. m.	5-para	—	2nd month	—	Left side only; mild. Bruit	—	—	—	—	Normal	—	
7	10. m.	1-gravida	—	2½ months	Chorea in childhood	Face and right arm only. Bruit	—	—	—	—	—	—	
8	21. s.	? Pregnant	—	?	Chorea at 8 yrs. acute rheumatism 6 wks. ago	Began in R. side, became general; severe. Bruit	—	—	—	—	108° at death, 98° for 3 days previous	None.	

made any attempt at spontaneous abortion. In only four of the seven cases were the spasms very severe, and this observation goes to show that chorea occurring during pregnancy is a mild disease in a fair proportion of instances. All the cases but one were maniacal at one time or another. In Cases 1 and 3 the mania did not appear till after delivery. The patients who were maniacal before induction of labour became sane very soon after delivery, relapse taking place for a few hours in two of them. The choreic movements were not so easily affected by emptying the uterus; in only one case did they subside at all rapidly. The induction of labour gives the woman, in a severe enough case, the best chance of safety. Drugs have no influence while the woman is still pregnant, unless the attack is very mild indeed. This was proved in all the cases, for attempts had been made to relieve the spasms with bromides, arsenic, and morphia before Dakin treated the cases. Chloroform was useful as long as the patient was anaesthetised, but its effect did not usually last beyond the recovery of consciousness. The influence of hyoscin after delivery over the chorea and mania in Case 3 was very marked. The temperature in all the fatal cases suddenly rose to 106° just before death.

The prognosis in any given case would seem to depend upon the severity obtained within a week or so of the first appearance of the spasms.

Mania must never be overlooked, however slight it may be in its beginning, and labour must be induced at once when the patient's mind begins to wander, however mild the actual spasms may be at the time. Induction must also be undertaken if the spasms are sufficiently severe to keep the patient awake at night. The manipulations necessary for this purpose must be performed under an anaesthetic. Dakin says that in future he would immediately resort to the cold bath if there was a sudden rise of temperature.

#### 2. Ciliary movement in the uterus.

Ludwig Mandl (*Centralblatt für Gyn.*, No. 13, 1898) remarks that many obstetricians are still teaching theories about impregnation and the causation of ectopic pregnancy which are based upon the erroneous belief that the uterine cilia strike upward. Mandl has therefore confirmed Hofmeier's work by examining uteri immediately after their extirpation. Small pieces were clipped from the mucosa and placed in warm saline solution under the microscope. Cilia were seen in acute movement, causing a current downwards from the fundus towards the cervix, in which blood-corpuscles were hurried along.

#### 3. Toxæmia in pregnancy.

Rynoch, at the Edinburgh Obstet. Soc. (May 11, 1898) read a

paper on this subject. By toxæmia in pregnancy was generally understood that condition which occurred as the result of the presence in excess of toxic material, and, as far as was known, the poison was of the nature of an alkaloid or alkaloids. The excretion of waste materials was mainly effected through the kidneys. Clifford Allbutt found evidence of a circulatory toxin in pregnancy, from the fact that healthy urine contained toxic material. Bouchard found that such urine, when injected into animals, produced symptoms ending in coma. The nature of the toxin was unknown, but it was not urea. Chambrelent's experiments proved the increased toxicity of the blood in eclampsia. Linderman had reported a case of fatal vomiting where he found neuritis in several nerves and fatty degeneration of liver and kidneys in both mother and foetus; he believed the cause of the vomiting to be an auto-intoxication.

#### 4. Uterine hæmorrhage as affected by the climate of altitudes.

Septimus Sunderland (*Lancet*, Oct. 15, 1898) finds that a high, dry climate is beneficial to certain cases of chronic uterine hæmorrhage which do not respond to ordinary treatment, and recommends that residence at a high altitude should be tried for as long a period as possible in cases where operation is not absolutely necessary, or is inadvisable from various causes.

#### 5. Deaths in child-birth.

At a meeting of the Royal Statistical Society held on June 21st, 1898, at the Royal United Service Institution, T. A. Coghlan read a paper on "Deaths in Child-Birth," collecting his data from the records of births and deaths registered in New South Wales in 1893-1896.

During the last three of these years there were 115,669 confinements, with 813 maternal deaths. Owing to the difficulty of obtaining accurate details in regard to the confinements of unmarried women, most of his statistics deal only with the married women to the number of 105,749 confinements, with 714 deaths. From these data, in his first table, the author deals with the mortality in consecutive confinements up to the twenty-third confinement, of which there were two instances. He finds that among married women the risk attending the first birth is greater than that at any subsequent one up to the ninth; the minimum risk would appear to be at the fourth. The great bulk of first confinements occur among women of twenty to twenty-four years of age. An examination of the first confinements at various ages shows that the risk attendant upon a first birth is at a minimum at the ages

of twenty-two and twenty-three years, when it is 0.0068 per cent., as compared with 0.0238, for instance, at the age of thirty-nine. An interesting table gives the average number of children to women marrying at different ages. If a woman marries at the age of twenty years the average number of children borne by her is 7.2, if at twenty-one years 6.8, at twenty-four years 5.6, at twenty-eight years 4.1, at thirty-two years 2.9, and at thirty-six years 1.7.

Taking the married with the unmarried for the four years, 153,090 confinements and 1,015 deaths, Mr. Coghlan comes to the conclusion that the risk of unmarried women in child-birth is at every age greater than for the married, the disproportion in the ratios being greatest at the lower ages.

#### 6. Pregnancy in relation to life assurance.

John Playfair and T. Wallace, F.I.A., F.S.A. (*Brit. Med. Journ.*, Sept. 17, 1898) discuss the extra risk to an insurance company in the case of a female who at the date of the insurance is pregnant. They refer only to the extra risk in a current pregnancy. All published data refer to the death-rate of or in child-bed, and not the death-rate for the whole period, from the beginning of pregnancy onward through confinement until complete recovery has taken place. It is doubtful whether the statement that during pregnancy a woman is less liable than at any other time to contract diseases other than those peculiar to pregnancy is correct; and it must not be forgotten that diseases peculiar to pregnancy are themselves full of danger, and often prove fatal; besides which, where other ailments are contracted during pregnancy, they may assume an aggravated form, or they may cause abortion or miscarriage, with blood-poisoning. The period of gestation as well as the time of confinement and the puerperium should be brought under observation.

The authors give a series of tables which they have compiled from the Edinburgh Maternity Hospital Experience, during ten and a half years, of 10,038 cases. At present many insurance offices postpone consideration of proposals from pregnant women until after confinement. Most of the offices which do entertain such proposals usually charge an extra premium, uniform in amount for all ages, the extra for a first pregnancy being twice as much as the extra for a subsequent pregnancy.

The following conclusions were arrived at:—

- (1) For the uniform extra premium at present charged, an extra, varying in amount according to age, should be substituted.
- (2) The extra premium for a first pregnancy should be at least three times as great as that for a subsequent pregnancy.

(3) A proposal for insurance from a woman aged thirty or upwards, pregnant for the first time, should be delayed.

(4) A proposal for insurance from a pregnant woman, aged forty or upwards, whatever the number of the pregnancy, should be delayed.

#### 7. Eclampsia ante-partum and post-partum.

Davis (*Amer. Journ. of Obstet.*, April, 1898) reports two cases of eclampsia. In the first, the patient, a primipara, aged twenty-one, was seven months pregnant, and when brought to the maternity was having severe convulsions at intervals of about ten minutes. The urine was of specific gravity 1020, reaction acid, urea 1.13 per cent.; serum albumin present in large quantity; pulse 120 to 140. She was put in a hot pack, normal salt solution was introduced continually under the skin for an hour, and 10 minims of veratrum viride were given hypodermically. Chloroform controlled the convulsions, which continued when the anæsthetic was suspended. Labour meanwhile was hastened and completed in about two hours. The child was still-born. The patient continued comatose, but recovered consciousness two days after admission. Treatment had been continued vigorously. The analysis of the urine was interesting; in the first specimen, secreted before convulsions were severe, the specific gravity was 1020, and the urea 1.13 per cent. After convulsions had continued several hours, the urea was 0.5 per cent., the specific gravity being unaltered. Forty-eight hours after admission the urea was 2.14 per cent. The patient made a good recovery.

In the second case the patient, a primipara, aged nineteen, seemed stupid when admitted in the first stage of labour. Delivery occurred normally, but some hours afterwards she developed severe convulsions, which continued at intervals of half an hour for six hours, when they ceased. Urine: specific gravity, 1002; acid, abundant albumin; urea, 0.51 per cent.; granular and hyaline casts. Good recovery. The author points out that it seems to be clearly demonstrated that toxins of unknown composition are the cause of eclampsia. These bodies are not found in the urine of eclamptic patients during the attack, nor are they found in great quantities in any urine; if they were present in the urine the patient would not have eclampsia. The percentage of urea is an index of the amount of waste successfully excreted: when it is high the patient is not forming poisonous compounds from it within her body. In the treatment time is most important; each half hour that passes without vigorous treatment is greatly to the patient's disadvantage. The hot pack and saline

injections under the skin and into the bowel should be given, whilst in the two cases related *veratrum viride* seemed of decided service.

#### 8. Age-changes in the placenta.

Eden, at the Pathological Society of London on March 15, 1898, read a paper on the age-changes in the placenta and membranes, and said that the structure of the placenta at term differed widely from that of the young and growing organ. The life of the placenta was a short one; it developed rapidly and as rapidly grew old, and was finally shed like a withered leaf. The ripe placenta was a worn-out organ, showing marked structural changes which were to be regarded as senile degenerations, and must be carefully distinguished from pathological processes proper. Senile changes could always be detected in greater or less degree in the healthy placenta. The recognition of these changes was an essential preliminary of the study of the pathology of the placenta, which was at present in a state of confusion, this being to a large extent due to two causes—first, to the frequent citation of the senile changes here referred to as evidence of disease; and, secondly, to the fact that macerated fetuses were generally selected for study. It was the object of the paper to endeavour to describe the structure of the placenta at all periods of gestation and to attempt to outline the changes which occurred in the organ when the fœtus perished *in utero*. It was convenient to regard the placenta as composed of two separate sets of structures and to describe first the fetal and then the maternal elements. Attention would be limited to the human ovum, and the earliest specimens Eden had examined personally were from the end of the first month. At this period the chorionic membrane was fully developed, its surface was covered everywhere with arborescent villi, and the decidua reflexa completely enclosed it. Special reference was made to the remarkable activity of the superficial or plasmodial layer of the chorionic epithelium at this period; the proliferation or budding of this structure was the first step in the formation of new villi. These features were seen only in the early months of gestation, and their presence was pathognomonic of young placenta-tissue. Eden next described the structure of the decidua, with the changes which occurred in the serotina, and resulted in the establishment of the maternal circulation through the intervillous spaces. These changes consisted in the invasion of the serotina by the chorionic villi and the opening up of the maternal vessels largely through their instrumentality. About the mid-term of gestation the villi could be distinguished by their plumpness and the better development of their connec-

tive tissue, stroma, and blood-vessels. At this period also large stems (*Stamenzetten*) were found, from which villi arose. The budding of the plasmodial layer continued. The following senile changes could be detected in the placenta at term:—(1) endarteritis obliterans affecting considerable tracts of the middle-sized umbilical arteroids; (2) degenerative changes in the plasmodial layer of the chorionic epithelium and in the decidual cells of the serotina; (3) formation of "white infarcts;" and (4) thrombosis of a certain number of the sub-placental sinuses and serotinal vessels. The presence of these changes in placental tissue was sufficient to indicate that it belonged to the last two months of gestation. After the death of the fœtus, if the ovum was retained, the maternal circulation through the intervillous spaces was not at once suspended, but some sinuses in which the villi appeared quite fluid could often be found in placenta that had been dead for many weeks. This was due to the fact that such villi remained in contact with the maternal circulation. Villi, which became shut off by thrombosis, rapidly underwent marked fatty degeneration. Ultimately they became reduced to structureless objects which retained none of their former characteristics except their shape. The blood-clot in the intervillous spaces did not become organised.

#### 9. Rupture of the umbilical cord.

Albert (*Arch. f. Gynäk.*, vol. lvi., part i.) divides injuries to the umbilical cord into three classes: (1) rupture of individual vessels in the cord; (2) rupture of the cord as such; (3) avulsion of the cord from the child's abdomen or from the placenta.

(1) Rupture of vessels may be due to varix; of this the author has found record of two cases, one in the fifth and one in the sixth month. In the latter case the membranes ruptured, a little blood came away, and the child died. A varix the size of a hen's egg had burst, and three other varices were found the size of a hazel-nut. Three cases are on record in which the rupture occurred near the point of division of the vessels in the placenta. In one of them, narrated by Westphalen, the cord passed from the umbilicus to the left side of the child, and over the back to the right side of the neck, where there was a fairly tight knot. In a third group of cases of rupture of individual vessels, the site of the lesion may be an aberrant vessel associated with a velamentous placenta, of which Leopold saw an example, a vessel passing along the membranes to a succenturiated placenta, as in a case in the Dresden Clinic. The author has found three other cases with a velamentous, and one with a succenturiated, placenta. The rupture in most cases appears to have been incidental to the

rupture of the membranes. In every case the child died. It is noteworthy that in every case the labour was spontaneous.

(2) Rupture of the cord itself may be due to operative procedures; it has probably occurred more often than records show. Two cases were noted at the Dresden Clinic during extraction by forceps. More easily understood are the cases in which the cord is ruptured by the fall of the child on the floor, when precipitate delivery occurs when the mother is standing up. Koch collected 37 cases of such delivery, in 6 of which the cord was ruptured, and some 6 other cases of rupture under similar circumstances have occurred. Spontaneous rupture of the cord during delivery in the horizontal position has been reported by several observers.

(3) Avulsion of the cord from the skin of the abdomen has been reported by Weeder, Dupuys and Bontemps, and Perret. Of avulsion from the placental tissue the author has found no case in medical literature, but he relates a case that occurred in the Dresden Clinic: when the child's head was born the cord was tightly fastened round the neck. As the face was beginning to be cyanotic, and the cord could not be loosened, it was about to be divided and the ends secured, when a strong pain expelled the breech, and it was found that the placental end of the cord was free. It was at once secured with forceps. When the placenta had been expelled, it was found that the cord had torn away just at its insertion. Probably one of the vessels had given way shortly before the birth of the child, for the amniotic fluid contained blood, and the child was somewhat anæmic for some days after birth.

#### 10. Thrombosis and embolism in child-bed.

Singer (*Arch. f. Gyn.*, vol. lvi., part i.) draws the following conclusions from the records of cases described by Mable and from those observed by himself:—(1) The formation of a thrombus is associated with a step-like rise in the pulse-curve, the curve coinciding with the completion of the thrombus and the appearance of lung symptoms. (2) The thrombus curve is characteristic: typically, the pulse-rate rises while the temperature remains normal, and then the former remains high while the latter rises. If œdema or lung-symptoms supervene, the highest point of both is reached, then the temperature falls, while the pulse-rate continues high. (3) If the temperature rises from the first, the thrombus is of the inflammatory type. (4) In such case the secretions should be carefully examined, and in many cases gonococci will be found, even where no internal examination has been made by either doctor or midwife before labour. (5) As regards treatment, the most important point is early recognition of the condition, and

the patient should then be kept absolutely in the recumbent posture.

#### 11. Appendicitis and pregnancy.

Pinard (*Sem. Méd.*, March 23, 1898) reports one and has collected 45 cases of appendicitis complicating pregnancy, the diagnosis being confirmed in 30 by operation or autopsy. He concludes from these that: (1) appendicitis may attack a pregnant woman at the beginning or at any time during pregnancy or the puerperium. (2) In most cases it causes abortion; the child dies as a rule very rapidly from infection, as the author's case proves from bacteriological examination. (3) It is only possible to save both the mother and child when the abscess is limited and encysted. (4) Every type of appendicitis may occur. (5) The diagnosis may be difficult owing to the enlarged uterus, or still more so during the puerperium, but is usually possible with care. (6) Treatment consists of operating as early as possible. A preliminary induction of premature labour is unjustifiable, since pregnancy is not always interrupted if the mother recovers. (7) Prophylaxis consists in operating in every case of relapsing appendicitis in a young girl or non-pregnant woman during the period of sexual activity, to prevent future complications during pregnancy.

#### 12. Extirpation of pregnant fibroid uterus.

Marchthurn (*Wien. klin. Woch.*, No. 31, 1897) publishes full reports of four cases in Chrobak's wards. Only one ended fatally; the operation was done in the sixth month. The first of the successful cases was operated on during labour at full term, the second and third at the fifth and third months respectively. Marchthurn tabulates eighteen other cases of total extirpation of the gravid myomatous uterus, from 1893 to June, 1897. Of these, fifteen recovered. Out of the fatal cases, 1 (operation at the sixth month) sank from collapse, 1 (seventh month) died of sepsis on the third day, and 1 (fifth month) of ileus on the twenty-eighth day. One of the successful cases underwent operation during the first month of pregnancy, 1 in the second month, 6 about the third month, 1 in the fourth month, 2 in the fifth month, and 2 in the ninth month. In the two remaining cases the stage of pregnancy is not stated. Naturally, many points of importance, such as the size and position of the myoma, cannot easily be explained by statistics. Marchthurn adds two cases of myoma confined to the cervix. In the first, pregnancy had advanced to the fourth month; enucleation was performed by abdominal section, but the patient died in forty hours. In the second, labour was commencing at term; oöphorectomy and

conservative Cæsarean section were performed, the child being saved as well as the mother.

### 13. Pregnancy and cancer.

Reismann (*Centralb. f. Gynäk.*, No. 38, 1897) discussed the duty of the obstetrician in respect to the management of the later stages of pregnancy where uterine cancer, too far advanced for operation, existed. He had under his care a woman, aged thirty-six, in her tenth pregnancy, and subject for some time to fœtid vaginal discharge and hypogastric pain. He found the cervix extensively cancerous and the parametrium infiltrated. Considering the dangers of delivery by the natural way, and the abdominal section, Reismann intended to wait till labour set in, and then to perform Cæsarean section.

Bitásko related a case where birth occurred spontaneously, and the cancerous mass was torn in half during delivery. The puerperium was normal.

Von Rézmárszky stated that he had operated on a case of this kind, but without waiting for labour pains. The child died in two days; the mother survived for two months. He was against the practice of waiting till labour commenced, and found that the uterus contracted well enough before the puerperal process had actually set in. What was essential was a sufficiently patulous state of the os to admit of the free escape of the lochia after operation.

## III.—EXTRA-UTERINE GESTATION.

### 1. Extra-uterine pregnancy.

John Taylor (*Lancet*, May 28, June 4, 18, 25, 1898), in a series of lectures, gives us what is known of this subject, and puts forward his views, based on previous records and his own observation.

After making some introductory and historical remarks, he says that no proof exists that an impregnated ovum can be arrested in the ovary; that arrest in the abdominal cavity between ovary and tube is probably always immediately fatal to the ovum; that arrest between the tube and the uterus may be regarded as arrest in the uterine part of the Fallopian tube, and that we have to deal with one kind only, viz., tubal pregnancy. All other varieties are secondary, and he divides them into:—

(1) tubo-abdominal, in which there is secondary invasion of the abdomen; (2) tubo-ligamentary, in which there is secondary invasion of the broad-ligament and sub-peritoneal tissues; and (3) tubo-uterine or interstitial, where the uterus is invaded.

Taylor classifies the earlier disturbances of Tubal Pregnancy

as follows:—(a) Early rupture of the tube from a pregnancy of two to six weeks' standing—an accident in which there is no warning of danger. There are often no physical signs, there is no symptom before that of sudden and copious bleeding, and history of pregnancy is either wanting or only represented by an account of menstruation delayed for one week or even less. The most usual seat of rupture is close to the uterus. In nearly all the cases there is some amount of non-development or atrophy of the tube. (b) The "Tubal Mole," where hæmorrhage occurs between the amnion and chorion, injuring or destroying the embryo. The "mole" in a few cases is extruded into the abdominal cavity, but in the majority remains firmly attached to the inner surface of the tube. Repeated hæmorrhages occur, though the abdominal ostium partially restrains the flow of blood into the peritoneal cavity. The enlarging tube falls usually behind the uterus and gradually fills the pelvis, displacing the uterus. The formation of an intra-peritoneal hæmatocele is then described. (c) Later rupture of the tube may take place from the first month onward, but is most common from the second to the fourth month. The hæmorrhage is not so immediately fatal as in the very early rupture, though more rapid than in cases of "tubal mole," where the outer layer of blood has time to consolidate, and form in some measure a "capsule."

(1) *Tubo-abdominal pregnancy*.—Taylor believes that the protection of an unruptured amnion is indispensable for the uninterrupted development of the fœtus, and describes fully a case in which he found a transparent membrane surrounding the fœtus, and protecting it in every direction. The membrane was very thin and not capable of separation or differentiation from the peritoneum except when it passed from one viscus to another, or from one coil of intestine to another. There are four different relations of the placenta to the main gestation-sac. In the first group the placenta is practically within the sac and covered by reflexions of the amnion; in the second, it has a foetal and maternal surface of nearly equal dimensions, the foetal surface being covered by the amnion and in immediate relation to the sac, while the maternal surface is growing from the spread-out remnants of the tube and from the peritubal tissues; in the third, the placenta remains within the tube and the maternal attachments are confined to the tube itself; in the fourth group the placenta is attached to the upper wall of a broad ligament sac outside the peritoneum, and the cord passes to the child through a hole in the ligament.

(2) *Tubo-ligamentary pregnancy*.—Fig. 3 represents a case of