and olfactory lobes presented a dark brown greenish staining. The cortex of the cerebrum, pons, and cerebellum under the pia mater exhibited numerous black nodules and spots. There were melanotic tumours in the base of the left lung, in the liver, in the retro-peritoneal tissue, and adherent to the outside of both suprarenal capsules, the substance of these organs being unaltered.

Melanotic Cancer in the Olfactory Mucous Membrane.

I have already stated that melanin pigment is of regular occurrence in the olfactory epithelium and in that of the labyrinth. Mr. de Santi has recently removed a melanotic cancer growing high up on the nasal septum, and the patient so far has no recurrence. The case is an extremely rare one. Mr. Arthur Cheatle has informed me that the occurrence of a melanotic growth in the labyrinth is not known to him.

CONCLUSION.

Experience incident to the removal of a large number of melanomas is similar to that in connexion with other varieties of new growths. Free and early excision is not followed by recurrence *in situ* except in malignant cases where the disease has already spread widely. Simultaneously with the change from melanoma to melanotic cancer there is a detachment and degeneration of cells producing metastasis which exhibits itself later on.

The general bearing of recent observations suggests the hope that further chemical research may arrive at a means of controlling the disease by therapeutic measures.

REFERENCES.

[Many references are included in those quoted below; references up to 1911 especially under (1).]

1. Pearson, K., Nettleship, E., and Usher, C. H.: *A Monograph on Albinism in Man*, Drapers' Company Research Memoir, Biometric Series IX, 1913, Pt. iv, Appendix B.
2. Hutchinson, J.: *Lancet*, 1886, i, 491; and in his *Archives of Surgery*, iii, 349; iii, 319; v, 123, 253.
3. Turchini, J., et Ladreyt, F.: *C. R. Soc. de Biol.*, 1921, lxxv, 905.
4. Kornfeld, W.: *Anat. Anzeiger*, 1920-21, liii, 216.
5. Baldwin, W. M.: *Anat. Rec.*, 1921, xxi, 323.
6. Bolk, L.: *Arch. f. mikr. Anat.*, 1910, lxxv, 414.
7. Adachi, B.: *Zeit. f. Morphol. u. Anthrop.*, 1903, vi, 1, 132.
8. Bahrawy: *Arch. f. Dermatol. u. Syph.*, 1922, xli, 171.
9. Smith, D. T.: *Johns Hopkins Hosp. Bull.*, 1920, xxxi, 239; xxxii, 240.
10. Symmers, W. St. C.: *Journ. of Anat. and Physiol.*, 1905-6, xl, 25.
11. Jaeger, A.: *Arch. f. path. Anat.*, 1911, cciv, 430.
12. Schnackers, W.: *Frankfurt. Zeit. f. Pathol.*, 1909, iii, 447.
13. Bloch, Bruno: *Zeit. f. physiol. Chem.*, 1916-17, xcvi, 226. Bloch u. Ryhiner, P.: *Zeit. f. d. ges. exper. Med.*, 1917, v, 179. Bloch: *Arch. f. Dermatol. u. Syph.*, 1921, cxxxv, 77; *Zentralbl. f. Haut. u. Geschlechts. Krankh.*, 1923, viii, 1.
14. Hollande, A. Ch.: *C. R. Soc. de Biol.*, 1920, lxxxi, 726.
15. Quattini, M.: *Gior. ital. d. Mat. Ven. e della Pelle*, 1923, fasc. i, 20.
16. Russell, B. R. G.: *Journ. of Path. and Bact.*, 1922, xxv, 409.
17. Fischl, F.: *Zeit. f. Krebsforschung*, 1921-22, xviii, 285.
18. Pawlowsky, E., u. Stein, E.: *Bull. Soc. Path. Exot.*, 1922, xv, 558.
19. Kreibich: *Zent. f. Haut. u. Geschlechts. Krankh.*, 1923, viii, 161.
20. Arustein, A.: *Wien. klin. Woch.*, 1920, xxxiii, 281; *Munch. med. Woch.*, 1920, lxvii, 902.
21. Kismeyer, A.: *Arch. f. Dermatol. u. Syph.*, 1922, cxl, 368.
22. Gans, O.: *Beitr. z. path. Anat. u. allg. Pathol.*, 1915, ix, 22.
23. Levin: *Arch. f. Dermatol. u. Syph.*, 1922, vi, 232.
24. Atwell, W. J.: *Endocrinology*, 1921, v, 22.
25. Brahm u. Schmittmann, M.: *Arch. f. path. Anat.*, 1920, cxxvii, 137.
26. Kutschera: *Frankfurt. Zeit. f. Pathol.*, 1922, xxvii, 21.
27. Gauvain, Sir H.: *Brit. Journ. of Tuberculosis*, 1920, xiv, 49.
28. Highman: *Arch. f. Dermatol. u. Syph.*, 1922, vii, 263.
29. Friedländer, P.: *Chem. Ber.*, 1909, xlii, 765.
30. Roaf: *Quart. Journ. of Exp. Physiol.*, 1911, iv, 89.
31. Jaeger, A.: *Arch. f. path. Anat.*, 1909, cxcviii, 1, 62.
32. Cairns, F. D.: *Brit. Journ. of Surg.*, 1922, x, 290.
33. Kaufmann, W. M.: *Arch. f. Dermatol. u. Syph.*, 1923, cxliv, 73.
34. Steden, E.: *Frankfurt. Zeit. f. Pathol.*, 1922, xxvii, 64.
35. Spencer, W. G.: *Trans. Med.-Chir. Lond.*, 1891, lxxiv, lix.
36. Deelman, H. T.: *Zeit. f. Krebsforschung*, 1922, xix, 125.
37. Lipschütz, B.: *Dermatol. Woch.*, 1923, lxxvi, 749.
38. Wieting u. Hamdi: *Beitr. z. path. Anat. u. allg. Pathol.*, 1907, xlii, 23.
39. Gilchrist, T. C.: *Journ. of Cut. and Genito-urin. Dis.*, 1899, xvii, 117.
40. Howlby, A. A.: *Trans. Path. Soc. Lond.*, 1890, xli, 314.
41. Csaki, L.: *Zeit. f. ges. exp. Pathol.*, 1922, xxix, 273.
42. Kob: *Beitr. z. klin. Chir.*, 1922, cxxvii, 709.
43. Eve, F.: *Practitioner*, 1903, lxx, 165.
44. Coley, W. B., and Haguet, J. P.: *Annals of Surg.*, 1916, lxiv, 206.
45. Dittrich: *Zent. f. Chir.*, 1921, xlviii, 579.
46. Chauvin, M. E.: *Bull. et Mém. Soc. Anat. de Paris*, 1921, xviii, 30.
47. Matsunga, P. T.: *Frankfurt. Zeit. f. Pathol.*, 1919, xxii, 69.
48. Moore, R. F.: *Proc. Roy. Soc. Med., Ophth. Sect.*, 1918-19, xii, 50.
49. Lawson, G.: *Trans. Path. Soc. Lond.*, 1875, xxvi, 178.
50. Keown, A. E.: *Lancet*, 1921, ii, 1057.
51. Pfingst, A. O.: *Arch. f. Ophthalmol.*, 1921, vol. 50, 431.
52. Fernando, A. S.: *Arch. f. Ophthalmol.*, 1923, lii, 168.
53. Robinson, A. R.: *Trans. 9th Internat. Med. Cong.*, Washington, 1887, iv, 269.
54. Lawford, J. B., and Collins, E. T.: *Roy. Lond. Ophth. Hosp. Rep.*, 1891, xiii, 104.
55. Olbert, S.: *Zent. f. Chir.*, 1906, xxxiii, 599.
56. Garrod, A. E.: *St. Bartholomew's Hosp. Rep.*, 1902, xxxviii, 25.
57. New, G. B., and Hansel, F. K.: *Journ. Amer. Med. Assoc.*, 1921, lxxvii, 19.
58. Holland, E.: *Journ. of Obst. and Gyn.*, 1908, xiv, 309.
59. Peters, W.: *Zeit. f. Urologie*, 1922, xvi, 1.
60. Ogle, C.: *Trans. Path. Soc. Lond.*, 1899, vol. 50, 4.
61. MacLachlan, W. W. C.: *Journ. of Med. Research*, 1913-14, xxix, 433.
62. Babinski, J., and others: *Rev. Neurologique*, 1922, xxix, 331.
63. Hirschberg, A.: *Arch. f. path. Anat.*, 1906, clxxvii, 229.
64. D'Agata: *Tumori*, 1922, ix, fasc. 2, October 15th.

DIFFICULT MIDWIFERY IN GENERAL PRACTICE.*

BY

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IN reading a paper and opening a discussion on such a comprehensive subject as difficult labour, I intend to limit myself to certain conditions and varieties of difficult labour which occur most frequently. In some of these the treatment has altered during recent years, and what was the accepted practice twenty years ago is now changed or considerably modified.

I would begin by emphasizing the fact that the importance of the obstetric branch of the art of medicine has of late been recognized in all the teaching schools. Less than twenty years ago the hospital student gleaned a few rudimentary facts from some small manual and proceeded to attend cases on the district with but a sketchy knowledge of the essential principles; the student of the present day attends the lying-in ward of his hospital day and night for a month before being allowed to attend cases on the district; and instead of an optional two months he is obliged to act as clinical clerk in the obstetric department for four months. Thus, by adequate instruction on normal cases and a considerable experience of abnormal cases, he comes to realize two very important things: first, the value of patience and the danger of interference in straightforward cases; and secondly, the importance of correct diagnosis in a difficult case so that the appropriate treatment may be carried out.

What the newly qualified doctor of the present day finds difficult is how to apply his hospital methods to general practice. For whereas in the hospital maternity ward time is no object, this is very far from being the case in private practice, and the doctor is found to be confronted at times with the problem of what is the best thing to do "in the circumstances." Sometimes forceps are applied before the suitable time has really arrived. In others, version has been performed. Sometimes all goes well, but at others the result is disastrous. The only real remedy lies in providing sufficient maternity beds in hospital in all towns for cases of difficult labour. Until such a time arrives I think it is fair to say that most doctors are to be congratulated on the skill and ingenuity displayed in conducting a busy midwifery practice. No doctor with surgical inclinations would dream of starting to remove an appendix in an ordinary bedroom, but there is no doubt that this is safer than many operations of difficult labour. In order to justify this assertion I would state that the mortality due to, and resulting from, childbirth is still very high for a "purely physiological" process, as it is termed.

The death rate per 1,000 births in 1920 was 4.1 (of which about 2.25 were directly due to abnormal labour, and 1.87 to puerperal sepsis of which the cause was often difficult labour).

Next, I will digress from the subject of my paper in order to speak about a theme of the greatest importance—namely, the prevention of difficult labour; and herein lies the most important advance in the practice of obstetrics.

The Prevention of Difficult Labour.

Ante-natal clinics have been formed and are still being formed all over the country, where the care of expectant mothers is carried on with great zeal. In the ante-natal clinic of to-day the pregnant woman is examined from time to time so as to exclude any possibility of difficult labour arising unforeseen. In noting the important points some such scheme as the following is used:

Scheme for Notes.

- Age.
- Date of last menstrual period.
- Expected date of confinement.
- Previous pregnancies or labours, with their character.
- External Measurement:* Interspinous. Intercristal.

* A paper read before the Dover and Folkestone Branch of the British Medical Association.

Abdominal Examination:

Height of fundus uteri; waist girth.

Lie and presentation of the foetus.

Foetal heart.

Size and situation of the foetal head, and whether it is engaged or can be made to engage in the brim of the pelvis.

Vaginal Examination:

Whether there is any abnormality of the soft parts.

Whether the sacral promontory can be felt; if so, the diagonal conjugate must be measured.

Whether the foetal head is engaged.

Whether there is any tumour in the pelvis.

Examination of the Urine:

This examination should be made during the seventh month and repeated about the thirty-sixth week, or more often if necessary.

At or soon after the thirty-sixth week it will generally be possible in a normal woman with a normal pelvis to say that labour will be normal.

This examination, carried out as a routine in all cases, is absolutely indispensable in first pregnancies, where special precautions have to be taken to deal with the following abnormalities: contracted pelvis; large foetus; breech presentations; other abnormal presentations.

This brings me to the first cause of difficult labour—namely, the contracted pelvis.

Contracted Pelvis.

Extreme degrees of contracted pelvis calling for Caesarean section are rare. Slight degrees of pelvic contraction are common and perhaps one of the commonest causes of difficult labour. For if the contraction be slight, examination during the last week or two of pregnancy may reveal nothing obviously wrong; when labour starts, however, the head fails to descend through the brim of the pelvis and early rupture of the membranes may occur. In such cases it is most important to make preparation for a long labour, and to make a firm resolution not to apply forceps until it is certain that the woman is unable to deliver herself unaided. In the early stages it is important to empty the bowels by castor oil and an enema, and to keep the bladder emptied, and maintain the patient's strength by light nourishment at frequent intervals. The keynote of the treatment is to allow time for the head to mould. The patient generally requires rest and sleep during such a labour, and this is best ensured by giving an injection of half a cubic centimetre of omnopon with scopolamine, repeated in an hour if necessary. There is no drug or combination of drugs so valuable, in my opinion, owing to its certainty of action. Forceps should be withheld until the following indications are present:

1. Foetal distress.
2. The head is sufficiently moulded and low down in the pelvis to allow a reasonable chance of delivery.
3. Maternal distress.
4. Commencing oedema of the vulva or vaginal orifice.

Cases in which these rules are disregarded are far from uncommon in the crowded districts of London; the patient, generally a primigravida, is sent up to hospital by her doctor because he has failed to deliver her with forceps. On examination she is found to be suffering from shock, but the os uteri is not completely dilated. An injection of omnopon and scopolamine is given and after a few hours' rest or sleep spontaneous delivery not uncommonly occurs.

Large Size of the Foetus and Foetal Head.

This is as common or commoner than contracted pelvis as a cause of difficult labour, and results in many cases from post-maturity. I have recently been much impressed with the frequency and importance of prolonged pregnancy. The normal period of gestation is 280 days, or forty weeks from the first day of the last menstrual period, but it is not infrequently prolonged a week or two. The foetus thus becomes unduly large and its head abnormally hard, so that when labour does come on it is difficult and prolonged, there is tearing of the maternal soft parts, and risk of injury to, or death of, the infant. Such difficulty can be prevented by terminating labour at the appointed date. This can be brought about by a simple scheme of treatment, provided that the details are carried out with care and precision.

The scheme, which may be called the "Intensive Method of Induction," is as follows:

On the expected date of confinement, first thing in the morning, say 7 o'clock, one ounce of castor oil is given; the result is best if it is given emulsified in a cup of very hot milk. After this a light breakfast is allowed. One hour later a hot bath is given for about fifteen minutes, the patient being immersed up to her waist. After this a tight binder is applied. One hour later a copious enema of soap and water is given. One hour later 10 grains of quinine sulphate are given with a hot drink. If labour does not start within two hours, 10 grains more of quinine sulphate are given with a hot drink, and this may be repeated again two hours later.

During the past six months this method has given uniformly good results in the obstetric ward of the London Hospital, and in other private cases directly and indirectly under my care, not only for women at term, but also as a means of inducing premature labour. In the event of the treatment being unsuccessful in its object it may be repeated in forty-eight hours and supplemented by two or three small injections of pituitrin. If this treatment is unsuccessful a second time, labour may be brought on by the introduction of bougies. In addition to the cases where pregnancy is prolonged, there are those in which it is advisable to bring on labour a week or two before full term because the foetal head has not engaged and seems to be getting large. There are also the cases of pelvic contraction in which premature induction of labour has to be carried out about four to five weeks before term.

Breech Presentation.

Next, I would like to mention the difficulties resulting from breech labour. These include primary and secondary uterine inertia, prolonged labour, and extension of arms, legs, and head. There is generally no real risk to the mother except that of a torn perineum, but there is a definite risk to the foetus especially in first labours, in which the mortality is certainly over 10 per cent. It is, therefore, important to prevent breech labour in primigravidae; this can be done by performing external version before labour starts, and converting the breech into a vertex. The most suitable time at which this can be done is the thirty-fifth week.

Ante-partum Haemorrhage.

Of recent years the treatment of ante-partum haemorrhage has followed much more conservative lines than formerly. First, it is important to find out whether the bleeding is accidental or whether it results from placenta praevia. If the placenta cannot be felt by the finger passed through the cervical canal into the uterus the case should be treated as one of accidental haemorrhage, and an expectant policy adopted for at least twenty-four hours. The patient is put to bed—in a hospital or nursing home if possible—and a hypodermic injection of morphine is given. Plenty of fluid may be taken by the mouth and in severe cases rectal saline may be given. The essentials are rest and warmth, so that the patient may recover from shock and the tone of the uterus may be restored. In many cases labour starts within twenty-four hours and spontaneous delivery takes place. If labour does not come on and fresh bleeding occurs, the best treatment is to rupture the membranes or to give an injection of pituitary extract. Either method will generally be followed by the onset of labour within a few hours. The advantage of rupture of the membranes is that labour is pretty certain to come on without delay; the disadvantage of pituitary extract is that its effect may wear off after a few hours and the uterus may again become atonic. If rupture of the membranes is followed by pains which are weak and infrequent there is no objection to giving an injection of pituitrin as well.

The same method of treatment may be followed in some cases of placenta praevia, but more often the bleeding is severe and recurrent, if not continuous, so that steps must be taken to stop the bleeding by inserting a Champetier de Ribes's bag or by performing version and bringing down a leg. But here again there are many cases which do very well if the membranes are ruptured and a tight binder applied. The treatment of placenta praevia by

Caesarean section is but rarely indicated, and should be reserved for special cases, as follows: (1) When the patient is a primigravida with a rigid undilated os and central placenta praevia, and the foetus is known to be alive. (2) When the patient is a multipara who has lost a lot of blood and can ill afford to lose any more. If I might emphasize one point in the treatment of ante-partum haemorrhage it is that the condition is one in which the advantages of treatment in a hospital or nursing home are very great.

Version.

I have already mentioned the value of external version during the later weeks of pregnancy to convert a breech presentation into a vertex. In such cases it may be easy, but an anaesthetic is often required. Version is also the correct treatment for a transverse lie, and in certain cases of placenta praevia. Version should never be performed to effect delivery when the presentation is a vertex and forceps have failed to effect delivery, for in such a case there is great danger of rupturing the uterus. This danger is very real in a transverse lie if version is attempted late in labour. Whenever the uterus is becoming irritable, and the pains are strong and frequent and cannot be completely abolished by anaesthesia, it is unsafe to attempt version. In such a case the foetus is nearly always dead, and its life need not be considered as in any way comparable with the mother's safety. Delivery should therefore be effected after perforation of the foetal head in a vertex presentation, or after decapitation for a transverse lie.

In placenta praevia and in accidental haemorrhage the uterine wall may be weak in places and easily ruptured if any force is used in performing version. Version should not be persevered with if reasonable attempts are unsuccessful, as the failure may be due to insufficient liquor amnii.

Post-partum Haemorrhage.

As in ante-partum haemorrhage, the cause of post-partum haemorrhage is generally (1) uterine exhaustion or lack of tone; (2) some placenta or membranes left behind in the uterus. In my opinion a most important predisposing cause of these two conditions is chloroform when given in fair quantity for a prolonged period, especially if pushed to a sufficient extent to allow the application of instruments. There is nothing which abolishes uterine contractions so quickly and effectually as chloroform, or, to a lesser extent, ether; and if the anaesthetic is given for any length of time there is likely to be difficulty in the third stage owing to deficient uterine contractions and post-partum haemorrhage will occur.

Post-partum haemorrhage is also likely to follow the overdistension of the uterus by twin pregnancy or hydramnios. In such cases, therefore, it is very important to keep very careful watch over the uterus for at least an hour after the delivery of the infant, and to have preparations in hand for a hot vaginal and intrauterine douche. If haemorrhage occurs after the expulsion of the placenta a hypodermic injection of pituitary extract should be given at once, and should be followed by a hypodermic injection of ergot.

Caesarean Section.

The comparative ease and safety with which Caesarean section can be performed has led to a considerable increase in the number of the operations. The scope of the operation has been widened to include not only the extreme cases of contracted pelvis, but also cases of pelvic contraction of a minor degree, of malpresentations, of eclampsia, of placenta praevia, and of accidental haemorrhage. The increased frequency with which the operation has been performed during the last few years has been accompanied by, first, an increased maternal mortality, and secondly, a considerable number of unfavourable post-operative sequelae of which the most serious is rupture of the uterine scar in a subsequent pregnancy. The result is that the pendulum has begun to swing in the opposite direction, and the number of cases of Caesarean section, in the London hospitals at any rate, has dropped considerably. The indications for Caesarean section should

certainly be as definite as for any other major operation. Before Caesarean section is undertaken the following points should be ascertained: (1) that the foetus is alive; (2) that the foetus has no reasonable chance of delivery *per vias naturales*; (3) that the labour is not far advanced; (4) that there is no undue risk to the mother. The great risk in the operation is sepsis from the uterus, resulting in death of the mother from peritonitis or septicaemia, or breaking down of the abdominal or uterine wound. If any sepsis be present the uterine wound will not heal well so as to leave a good scar. Weakness of the scar may also result from inefficient suture of the uterine wound. There is no operation in which it is more important to have favourable conditions for the carrying out of a perfect aseptic technique. The risk of a weak scar has of recent years been overcome by making the incision into the uterus through the lower uterine segment after pushing down the bladder. The objection to this is that the operation is more difficult, and if the child is large it may be difficult to extract. The incision has much to recommend it, and I consider it a marked advance on the old incision. Caesarean section in cases of eclampsia has a high mortality, among hospital patients at any rate, and is performed less frequently than formerly. Caesarean section in cases of central placenta praevia or severe accidental haemorrhage is, in my opinion, a good method of treatment in picked cases.

Unreduced Occipito-posterior Position.

The difficulties likely to arise in connexion with an occipito-posterior position result from uterine inertia, prolonged labour, and the application of forceps. Following these there may be a torn perineum, torn cervix, or injury to the bladder, and permanent weakness of the pelvic floor resulting from difficult forceps delivery. There is also a possibility of rupture of the uterus during forceps or manipulations. The correct treatment consists in making sure of the diagnosis when the condition is suspected, and promoting flexion of the foetal head during the first stage, by posture. If the occiput does not rotate after a reasonable time in the second stage an anaesthetic should be given and the head, with the body of the foetus, should be rotated. If reduction cannot be performed and the head is well down, tentative and judicious trial of axis traction forceps may be made. If the head does not descend with gentle traction, perforation of the foetal head should be performed.

After the paper there was a discussion, and questions were asked by many members present. In reply Mr. Luker pointed out that he did not think that any harm resulted from giving drops of chloroform during the latter part of the second stage, but he wished to emphasize the danger, in his opinion, of large quantities for any length of time.

ACUTE LUMBAGO TREATED BY THE INJECTION OF QUININE AND UREA.

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OF common minor ailments there is none which may be more completely paralysing than acute lumbago. In an instant an individual in the full vigour of health may find himself unable to make the slightest movement of the trunk without the most exquisite pain, and he may remain confined to bed for weeks as an absolute cripple. Even in the slightest cases, though the acute symptoms may pass off in a few days, it will be ten days at least before he can stoop with freedom and comfort. In severe cases the slightest movement, or even a sudden noise, may induce a spasm of pain, with a violent contraction of the lumbar muscles, a reflex attempt at protective fixation. The contraction may last for several seconds, and only slowly and cautiously will the patient allow the muscles to relax.

An attack is often brought on by a chill following exertion, such as may occur from sitting in clothes damp from perspiration: An attempted movement produces a spasm