Three days later vomiting occurred and persisted for twenty-four ours. The lochia were offensive, although there was no uterine enderness. Coliform bacilli and streptococci were isolated from a hours tenderness. vaginal swab and a vaccine was prepared. A low pressure anti-septic vaginal douche was given daily. Ergotin was given hypo-dermically and iron and arsenic were administered by the mouth; six days later the patient was much improved and the thrombosis was resolving. Sh after parturition. She was discharged from hospital twenty-five days

was resolving. She was discharged from hopping the previous after parturition. This was the patient's ninth pregnancy. During the previous pregnancy an unusual degree of pallor had also been noted and parturition was followed by a fairly large loss of blood and slight sepsis during the puerperium. There is therefore evidence of a **pre-existing** uterine infection. No evidence of syphilis was noted.

The Placenta. The placenta measured 21 cm. by $17\frac{1}{2}$ cm. and was of the battledore variety. On the foetal surface a tumour $9\frac{1}{2}$ cm. by 8 cm. was present which projected some 4 cm. from the surface of the placenta. It was roughly reniform in shape and a few vessels could be traced from the insertion of the cord to ramify in its substance. The membranes extended evenly over the surface of the tumour except at one pole where there was slight distension by blood clot.

the tumour except at one pole where there was slight distension by blood clot. On section the placenta was yellowish-pink in colour, had a rather myxomatous appearance, and appeared homogeneous in structure. Blood vessels were fairly numerous. The maternal surface showed a smooth area about 13 cm. by 9 cm. subjacent to the tumour, over which the cotyledons were compressed and flattened. The remainder of the placenta appeared normal except that the sulci were unusually well marked, and the cotyledons were smuch separated. Here and there between the cotyledons were small collections of blood clot, but no distinct "ponds" suggestive of ante-partum haemorrhage.

Histological Examination. The histological structure of the tumour varied considerably in different areas. Some showed numerous and massed capil-laries, with walls of a single layer of endothelium, embedded in a rather myxomatous-looking stroma. A few arterioles and venules were present. Other areas were predominantly cellular with few capillaries. The cells present were mainly young connective tissue cells, but a few scattered eosinophils were also seen. One or two nucleated red cells were predominative capillaries. two nucleated red cells were noted in the capillaries.

The only factor which may be of etiological importance in this case is the evidence of pre-existing uterine infection.

We are indebted to Mr. Comyns Berkeley, Obstetric Surgeon to the City of London Maternity Hospital, for permission to publish this case.

HAEMOPHILIA IN THE FEMALE.

MILDRED WARDE, M.B., F.R.C.S.

THE following case is of interest on account of the rarity of haemophilia in the female. The patient, a woman aged 47. was admitted to the Cancer Hospital with carcinoma of the breast, and stated that she was a "bleeder." The family tree is shown in the accompanying chart and the following details have been ascertained.

According to family tradition the disease is traceable through the paternal grandmother from her father to her son, the patient's father. The latter exhibited a great tendency to bruising and had epistaxis about every two weeks. Trivial injuries frequently caused swelling of the joints, one or other of which was almost constantly affected. Death is thought to have been due to haemorrhage connected with fracture of the leg, which occurred shortly before, "fragments of bone working out with much bleeding."

The patient's five brothers were all normal and their children are believed to have been unaffected. Of the five sisters of the patient three were normal; one died, with a son aged four months, from "blood poisoning"; and in one the history as to haemophilia is wanting.

With regard to the sisters' children, the eldest sister (Mrs. G.) had seven daughters, all of them normal, and seven sons, three had seven daughters, all of them normal, and seven sons, three of whom were alive and healthy, while four were supposed haemophilics. Of these four, one (F. G.) spent most of his life in hospital with bruises, epistaxis, joint affections, etc., and died in 1905 in the Fleming Memorial Hospital, Newcastle; the second died at the age of 2 years from "bleeding," the source of which is not known; the third, said to have been a "bleeder," died in France from haemorrhage after a wound; the fourth (A. G.) was recently in the Royal Victoria In a bleeder, died in France from naemorrnage after a wound; the fourth (A. G.) was recently in the Royal Victoria In-firmary, Newcastle, with a haematoma of the size of an orange under the scalp, the result of a kick. The tumour still fluctu-ated and coagulation seemed absent although the injury had been inflicted a month previously. There was also a history of frequent treatment for bruises, bleeding from the gums, swollen joints, and "lumps appearing after the slightest knocks.

The second sister (Mrs. T.—interviewed) had four daughters, all of them normal, and four sons, "bleeders." Of these four, one (G. T., aged 35—interviewed) is rarely free from swelling of some joint, most frequently the knee, and suffers readily from bruises, which sometimes bleed for hours, and from epistaxis and rectal haemorrhage (bright blood). In the London Hospital in 1920 he bled for a fortnight from a deep cut in the thumb, for which horse serum was given by the mouth and locally. In St. James's Infirmary, Wandsworth, in 1922 he was seriously ill after the extraction of two neighbouring teeth, and plugging had always been necessary after tooth extraction. The second son (P. T.) had attended the Yar-mouth Hospital most of his life for joint affections, epistaxis, etc. and at the are of eighteen months had nearly blad to mouth Hospital most of his life for joint anections, episoaxis, etc., and at the age of eighteen months had nearly bled to death from a slight cut on the chin. He died in the Yarmouth Hospital in 1912 at the age of 11 years, from haemorrhage from a cut of the finger, due to a fall on the beach. The third son died at the age of 4 years. He had tripped on the stairs, without sustaining any serious injury, and the next day vomited blood and died within twenty-four hours. The fourth son died at the age of four months from some unknown fourth son died at the age of four months from some unknown cause. At birth there had been troublesome haemorrhage from the umbilical cord.

The third sister had one daughter, normal, and a son who died at the same time as the mother (blood poisoning) at the age of four months.

The fourth sister had one daughter, normal.

The youngest sister had one son and one daughter, both normal.

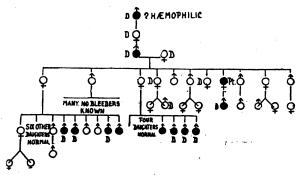


Chart of family of F. C. (1) D=known to have died. (2) The order of the children in generation below that of patient is not known.

The patient's history is as follows: At the age of 10 years she was found unconscious from bleeding following tooth extraction performed a few hours previously; she remained in the Yarmouth Hospital about three weeks. On a subsequent occasion she suffered from severe haemorrhage from a cut of the thumb, for which she was treated in the Middlesex Hospital. At the age of 21 an abscess in the labio-gingival fold was opened; severe haemorrhage followed in spite of plugging and she was in bed for two weeks. She always had a great tendency to bruising, but only after definite injury. At the birth of her son (F. C.) she suffered from post-partum haemor-rhage. The son died at the age of 5 years in St. Mary's She always had a Hospital, Paddington, the following being the notes of the case: "May 22nd, 1910: Onset of bleeding from rectum 7 p.m., continued all night. May 23rd : Admitted, blanched and collapsed. Died thirty hours after onset. No necropsy allowed." In view of the certain diagnosis of carcinoma of the breast, it was decided, after discussion with the patient, to take the risk of an operation, as the patient's general condition was satisfactory and the blood count showed only a mild secondary anaemia. The cosquation time was between 3 and 3.35 minutes at 37° C. By way of pre-operative treatment 30 grains of calcium lactate were given by the mouth every other night, and artificial anaphylaxis induced by a subcutaneous dose of 5 c.cm. of horse serum, followed thirteen days later by 1/2 c.cm. There was some urticaria around the site of the original injection, with headache and malaise. The coagulation time after this was between 1.40 and 2 minutes at 37° C. 1/2 c.cm. At the operation bleeding was free but not excessive, and the At the operation meeting was free out not excessive, and the wound was swabbed with horse serum before closing. There was little shock after the operation. Blood-stained serum oozed freely from the state wound from the tube for three weeks, and slightly for nearly three weeks longer. Healing was slow, and slightly for nearly three weeks longer. but otherwise convalescence was uneventful.

In an extensive and interesting monograph on haemo-philia Bullock and Fildes (Eugenics Laboratory Memoirs, No. XII, 1911) describe three types of haemophilia as

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occurring in women: (1) well marked haemophilia resembling that in the male, (2) haemorrhagic diathesis in females not connected with haemophilic families, and (3) "an abnormal tendency to bleed in female members of admitted haemophilic families, such tendency being slight or atypical as compared with well marked haemophila." The patient appears to belong to this last class.

I wish to thank Mr. R. H. Jocelyn Swan for his permission to publish this case; and Dr. Meadows of Yarmouth and the Registrars of St. Mary's Hospital, Paddington, the Victoria Infirmary, Newcastle, and the Yarmouth Hospital, for their kindness in supplying particulars of the cases under their care.

INSULIN TREATMENT: A SUGGESTION FOR AN OPTICAL METHOD.

BY

W. F. LLOYD, B.A., M.B., PHYSICIAN, KING EDWARD VII HOSPITAL, WINDSOR.

THE insulin treatment of diabetes requires an accurate estimation of the glucose in the blood, and an easy method by which this could be accomplished would be welcomed by general practitioners. I have made determinations of the amount of glucose

I have made determinations of the amount of glucose in solution by measuring the index of refraction of the solution. The instrument I have used is described in Schuster and Lee's *Exercises in Practical Physics*, and depends on the measurement of the critical angle. The instrument is simple, and only one or two drops of the liquid are required. It would have to be assumed that any alteration in the index of refraction of the blood was due to the amount of glucose contained in the blood, and in

British Medical Association.

PROCEEDINGS OF SECTIONS AT THE ANNUAL MEETING, 1923.

SECTION OF OBSTETRICS AND GYNAECOLOGY.

VICTOR BONNEY, M.S., M.D., F.R.C.S., President.

DISCUSSION ON

THE USE AND ABUSE OF OBSTETRIC FORCEPS.

OPENING PAPERS.

I.—COMYNS BERKELEY, M.A., M.D., M.CH.CANTAB., F.R.C.P.Lond.

EFFICIENT TEACHING.

I THINK it must be admitted that the very unsatisfactory position of the forceps operation to-day is due to inefficient teaching. It is not fair, as has often been done in the past, to shift all the blame on to the family doctor, and I feel that the teachers of obstetrics must shoulder their share of this responsibility, which, if anything, is greater than that of their pupils. That the teachers themselves are, however, not entirely at fault is obvious, for they have not the facilities to teach midwifery properly. In the end the responsibility for this inefficient teaching, in the past at any rate, must rest on the General Medical Council and the various examining bodies, who have it in their power to prescribe what rules and regulations they think fit.

The majority of students when they get into practice are not going to operate, and yet, before they can sit for their final examination, they have to spend three months in the out-patient and six months in the in-patient surgical departments of their hospital, working under the direct supervision of the chiefs of these departments. The majority of students, however, are going to practise midwifery, and yet many of the examining bodies do not a diabetic patient I think that this assumption is warranted.

Starting with a 10 per cent. solution of glucose the index of refraction was measured, and weaker solutions were taken with the following results:

Refraction.		

At about 1 per cent., therefore, the solution could not be distinguished from water, which has an index of refraction of 1.333. The instrument, however, might be improved to give more accurate readings, and if this can be accomplished a quick and ready method of estimating the glucose is quite possible.

Another method which was attempted was a measurement of the rotation of the plane of polarization, but the same difficulty was experienced—the method was not accurate for very small percentages.

Some years ago I made experiments on the index of refraction of the fluids of the human body with a view to distinguishing between inflammatory and serous effusions. The following table embodies my results:

						Index of			
			and the second second		£	Refraction.			
	Pleural effusion	•••	•••	· •••	· · · · ·		1.343		
•	,, ,,	•••				•••	1.347		
							1.346		
	Ascitic fluid						1.336		
	Fluid from oedema Cerebro-spinal fluid			•••	•••		1.336		
							1.339		
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I am of opinion that an optical method for determining the amount of glucose present in fluids can be elaborated which would give a more accurate result than the chemical method, would be more simple, and take much less time.

compel them to attend any midwifery cases in a hospital, and there is no rule that any of the twenty women they must deliver shall be delivered under the immediate supervision of the chief of the department. Not many years ago the obstetric house-surgeon used to take the pupil to his first two cases only, and he had to look after the remaining eighteen as best he could. Until lately it could be said without exaggeration that most men went into practice without ever having seen a woman delivered as she should be—that is, in suitable surroundings.

The life or health of a patient may easily depend on the good or bad judgement of the medical attendant, and often does. In no instance, perhaps, is this fact more striking than in the practice of midwifery. It is recognized that the only way in which students can attain good judgement is by being given efficient teaching and ample opportunity in practical work, but whereas both efficient teaching and ample opportunity are always within the reach of every student when he is studying medicine and surgery, when he comes to study midwifery his opportunities for practical work under supervision are extremely limited. Although it is now the custom, at those hospitals which have maternity beds, for the midwifery pupils to take their first two cases under the supervision of the obstetric house-surgeon or sister midwife, I believe, up to the present, only a few of the examining bodies insist on this. Apart from unavoidable complications, a bad result in midwifery is too frequently the result of bad judgement. Moreover, the only way to obtain a real knowledge of the bad results of midwifery, and among other things of the abuse of the forceps, is to attend the practice of the gynaecological ward, and yet this is not compulsory. More recently in some hospitals, it is true, the deans have refused to "sign up"? students unless, and until, they have been in-patient gynaecological dressers; but the General Medical Council did not insist on the students holding these posts, and the more cautious deans refused to adopt such an attitude. Most of the students, being aware of the fact that they only had to serve three months either in the in-patient or out-patient department, chose the latter because it gave them less trouble.

The bad results of midwifery are partly due to want of