prolonged. The literature contains very little information about the bleeding-time on the day of operation, and there is room for more careful recording of data concerning this point.

Summary

The case is reported of a patient with von Willebrand's disease who had a successful partial gastrectomy for gastric ulcer. The operation was performed at a time when the bleeding-time was normal. There was no excessive haemorrhage at operation, but a haematemesis on the second post-operative day responded well to blood transfusion.

The case is discussed in relation to those previously reported, and it is emphasized that, although all authors stress the hazards of operation in von Willebrand's disease, the literature contains only one record of a fatal operation. The relatively favourable prospects for surgery in von Willebrand's disease are contrasted with the extremely bad results of operations in cases of haemophilia.

It is probably desirable to take advantage of the natural fluctuation of the bleeding tendency and to perform an elective operation when the bleeding-time is not greatly prolonged.

We are grateful to Dr. T. H. Boon for permission to report this case.

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Medical Memoranda

A Case of Acute Inversion of the Uterus

As the incidence of acute puerperal inversion of the uterus is estimated at between 1 in 17,000 and 1 in 200,000 deliveries and the extreme gravity of this condition is equalled only by its rarity, it is worth while to record this case.

CASE REPORT

A 2-gravida aged 19 was admitted to hospital at midnight on March 19, 1955, with a history of having started in labour four hours before admission. Her pregnancy had been quite uneventful and the expected date of delivery was March 22.

On examination she was found to be a healthy young woman, well established in labour. The size of the uterus was consistent with a full-time pregnancy and the foetus was presenting by the vertex. The position was left occipito-anterior, with the foetal head in mid-cavity and the cervix uteri well applied to the head and dilated to one finger-breadth. Uterine contractions recurred every four minutes and the foetal heart was satisfactory.

Labour proceeded normally until spontaneous delivery of a live male child, weighing 8 lb. 9 oz. (3.9 kg.), at 3 a.m. after a first stage of seven hours and a second stage of 20 minutes. The placenta appeared to be in the vagina 30 minutes after delivery. There had been only very slight haemorrhage up to this point. An expulsive effort on the part of the mother delivered the placenta readily. There was slight delay with the membranes, but these eventually delivered following gentle traction. Immediately after the delivery of the placenta a severe post-partum haemorrhage occurred, a total of 3 pints (1.7 litres) being lost within a few minutes. On examining the abdomen no definite fundus could be palpated, nor could one be rubbed up. Ergometrine tartrate, 0.2 mg., was immediately given intraven-

ously, and within a minute what appeared to be a fundus developed low in the abdomen.

The blood loss ceased, but the patient's condition continued to deteriorate rapidly. She was in profound shock, was restless, and complained feebly of lower abdominal pain. The pulse rate was 120 a minute and the blood pressure could not be recorded.

On further examination what appeared to be the fundus had a definite cup-shaped depression on its upper surface. A vaginal examination revealed the uterus to be inverted and lying in the vagina. At this point, six minutes from delivery, the only pulses detectable were the carotids and the apex beat. The patient was unconscious. A dextran drip was set up while blood was being cross-matched. The transfusion was run in rapidly, 1 pint (570 ml.) being given in about 15 minutes. Cross-matched blood was then available and a rapid transfusion of this was begun.

The blood pressure was 70/50 mm. Hg and the wrist pulses were detectable. Slight improvement in the general condition having occurred, it was decided to reduce the inversion. With the transfusion continuing, and under nitrous oxide and oxygen anaesthesia, reduction by taxis was accomplished without undue difficulty. After the reduction, recovery could only be described as dramatic. The blood pressure rose to 110/80 mm. Hg and the pulse rate dropped to 80. Colour, respiration, and general appearance improved rapidly.

A further 2 pints (1,140 ml.) of blood was given to replace the initial loss. The patient recovered consciousness two hours after the reduction of the inversion, "feeling fine."

The puerperium was uneventful, involution proceeding normally. Breast-feeding was readily established and the patient was discharged from hospital on the tenth post-partum day, feeling fit and well, with a haemoglobin of 10 g. per 100 ml. Further progress at home was maintained.

COMMENT

Though the majority of inversions seem to be due to some error of management on the part of the attendants, cases of spontaneous inversion have been recorded. In this case the placenta was expelled by the mother's effort, and the only factor that may have contributed to the production of inversion was traction on the foetal membranes. This was very gentle and no resistance to the delivery could be discerned. It is felt that this was probably a case of spontaneous inversion, though traction on the membranes, however gentle, cannot be excluded as a probable cause.

The importance of making a vaginal examination in a case of shock following delivery must be stressed, as an incomplete inversion of the uterus may not be diagnosed unless it is done. We were grateful to have available a plasma substitute: its effect was life-saving while blood was being obtained and matched.

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Agranulocytosis during Phenindione Therapy

Agranulocytosis is an apparently rare complication of anti-coagulant treatment with phenindione (phenylindanedione, "dindevan," "indema"). MacMillan and Brown (1953) reported two Canadian cases, one being fatal; both, however, had also received other drugs. Kirkeby (1954) described a definite case from Norway. A suspected case (without blood counts) was contributed by Mayer (1954).

We estimate that some 900 patients have been treated with phenindione in this hospital: we have been unable to trace a previous case associated with agranulocytosis.

CASE REPORT

A man aged 59, editor of a periodical, was admitted on October 23, 1956, five days after a myocardial infarction and three years after a previous attack. Routine phenindione treatment was supported with heparin for the first

two days, and thereafter continued on 100–125 mg. daily in two doses, with prothrombin times (Quick) between 1.4 and 2.1 times the control readings—that is, in the range of moderate therapeutic effect.

After 27 days of treatment, during which the only additional drugs given were chloral hydrate and liquid paraffin, a fever of 102° F. (38.9° C.) was recorded. The following day the white-cell count was 3,700 per c.mm. (polymorphonuclears 3%, mononuclears 97%), compared with a count of 11,000 (polymorphonuclears 80%) on admission. The throat was injected but not sore, and there was no rash on the skin. Phenindione was withdrawn and 600,000 units of procaine penicillin injected daily. On the next day a marrow aspirate showed numerous myelocytes but no mature polymorphs; a few metamyelocytes and band polymorphs were seen in the peripheral blood.

After four days of fever the temperature dropped to around 100° F. (37.8° C.), finally settling after a further week. Mature polymorphs reappeared in the peripheral blood on the sixth febrile day.

COMMENT

It seems from the reported cases that, when agranulocytosis occurs, it is to be looked for after 20 to 30 days of phenindione treatment. In Kirkeby's case, that of a man aged 58, the complication presented with a rash during the fourth week of treatment, which was apparently continued, and agranulocytosis appeared in the fifth week. MacMillan and Brown observed fever in the fourth week, followed by agranulocytosis after some days, in one of their cases, that of a woman aged 57; and in the other case, that of a woman of 64, pyrexia, rash, and agranulocytosis appeared together in the fifth week of a course of treatment which had been interrupted during the fourth week. Mayer's patient developed a rash and fever also in the fourth week. This time interval was observed in our case.

It would probably be wise to withdraw phenindione if a rash or fever appears during treatment, particularly during the fourth week. In our case heparin was substituted.

Kirkeby's patient died in uraemia after marrow function had recovered. MacMillan and Brown's second patient died of agranulocytosis. The other, with our own, recovered.

Numerous myelocytes in the marrow aspirate, as in the present case, suggest a favourable prognosis, provided that infection can be controlled. This is in line with Plum's (1937) work on amidopyrine agranulocytosis and with Hutt's (1951) observations on the agranulocytosis of thiouracil. Plum demonstrated the sequence of events to be: a fall in granulocyte precursors in the marrow; a fall in circulating polymorphs; return of marrow precursors; and, lastly, return of circulating adult cells. Thus to find myelocytes in the marrow during the phase of granulopenia is to observe the beginning of recovery.

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Twin Pregnancy: Well-formed Hydatidiform Mole Associated with Normal Viable Child

An African, Jalu, woman aged about 28 was admitted to the Nyanza General Hospital, Kisumu, on July 6, 1955. She was a multipara and had not been attending the hospital or other antenatal clinic. So far as could be judged, she had had a menstrual period about mid-December, 1954, and was expecting her child in September. Her obstetric history was: a girl in 1945, a boy in 1947, a girl in 1951, and a boy

in 1952 (all these children are still alive and well, and there was no history of obstetrical complication either during pregnancy or on confinement); four-months abortion in March, 1954, apparently complete and uncomplicated.

The patient could only give mid-December as the nearest date of her last menstrual period. She stated that her pregnancy proceeded normally until during the first week in June, when she noticed a slight blood-stained vaginal discharge. This continued until her admission, and, although slight, was more or less continuous.

On examination the height of the fundus of the uterus corresponded to an eight-months pregnancy. The foetus was readily palpated in the R.O.A. position, but was high. The feel of the lower segment indicated that there was an apparent soft mass in the lower left-hand quarter. The foetus seemed to be small, but the foetal heart was strong. The vaginal discharge was bright red and appeared to be normal blood. On vaginal examination a soggy mass was felt between the examining finger and the foetal head. A tentative diagnosis was made of left-sided marginal placenta praevia, but as loss per vaginam was minimal it was decided to be conservative in treatment.

The patient was confined to bed and sedated with 10 gr. (0.65 g.) of potassium bromide thrice daily. She settled down under this treatment and the bleeding ceased.

On July 26 she went into spontaneous labour, and within an hour delivered herself of a live male child weighing 4 lb. (1.8 kg.) and obviously premature. Its state of development was approximately that of a 30-weeks gestation. While waiting for pulsation to cease in the cord, a mass appeared at the perineum and a moderate-sized hydatidiform mole (see Fig.) slipped out, aided by slight pressure on the fundus. The cord was separated and a complete normal placenta and membranes were delivered five minutes later.

It is the intention to follow up the case by Aschheim-Zondek tests at regular intervals, subject to the patient's co-operation—a doubtful possibility in a peasant African. At the time of writing the mother was well and fit, and the puerperium was running a normal course. The baby, on the other hand, was very weakly, and it is doubtful if it will survive.

COMMENT

It is admitted that if the possibility of hydatidiform mole even crossed my mind it was almost immediately discarded because of the advanced stage of pregnancy. My previous experience is of one similar twin pregnancy, but the patient, an Asian, spontaneously emptied her uterus in the fifth month. Discussion with colleagues at the Nyanza General Hospital confirmed my opinion that such pregnancies were a rarity, and no one had heard of one proceeding so far. Investigation at the Medical Research Laboratory Library produced an article by Dr. Elizabeth M. Rose (1952), who had a similar case on June 13, 1949. She could trace only two such previous cases: one by Waters and Crunden (1943) and the other by Favreau and Bélanger (1939).

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