Practical Points of Diagnosis and Treatment in Surgery and the Specialities.

INDICATIONS FOR TREATMENT BY GLYCERINE IRRIGATION.

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THE indications for treatment as carried on at St. Mary Abbots Hospital are :—

Ante-Natal Cases.—(1) Erosion of cervix ; (2) leucorrhœa ; (3) gonorrhœa.

Labour Room.—(1) Cases in which there has been any internal manipulation ; (2) retained placenta or membranes ; (3) post-partum hæmorrhage ; (4) eclampsia.

Post-Natal Cases.—(1) Cases in which there has been any internal manipulation during labour ; (2) "three nines," i.e., temperature 99° F. and pulse 90 ; (3) after pains or uterine colic ; (4) offensive lochia and cases in which there has been any discharge during pregnancy ; (5) secondary hæmorrhage ; (6) erosion of cervix ; (7) albuminuria ; (8) eclampsia.

Gynæcological Cases.—(1) Following miscarriage ; (2) chronic endometritis ; (3) gonorrhœa ; (4) erosion, (a) with menorrhagia, (b) with metrorrhagia ; (5) salpingitis.

It should be borne in mind that two types of uterus have to be treated :—

(1) The large puerperal uterus ; (2) the small uterus, (a) acute, (b) chronic.

The Large Puerperal Uterus.—After childbirth the uterus is large and the canal widely open, and is relatively insensitive. Moreover, this is the best time to tackle a septic uterus. The glycerine can therefore be given in large quantities—as much as 1,000 c.c. a day for the first few days, the quantity gradually diminishing as the uterus becomes smaller. In this type of case it is particularly interesting to note that in our experience, extending over many hundreds of cases, it has not been found necessary up to now to explore for retained products after the third stage. Many cases have thus been treated with glycerine, even in the presence of a somewhat severe hæmorrhage, and the inflammation which has produced the hæmorrhage has been effectively controlled. A point is often raised as to whether the catheter, if left in for some hours, does not slip out. We think with care, and a pad placed over the vulva, and the knees held together in between the irrigations, that a tube can easily be kept *in situ* for from six to eight hours. If perchance the tube does slip an inch and a nurse has record of this (the catheter is marked in inches) it can be pushed back into the uterus before commencing the hourly irrigations.

The treatment of miscarriage is on similar lines. Usually retained products present themselves at the os and can be twisted out. If hæmorrhage is severe it is wiser to immediately explore the uterus and remove the contents with the finger. If sepsis complicates this condition drainage is assiduously carried out before resorting to exploration. The only indication for exploration in the presence of pyrexia is severe hæmorrhage, but if the practitioner is confronted with an inevitable abortion naturally the advisability of evacuating the uterus should be considered. As miscarriage is usually the result of chronic endometritis, drainage should always be continued until the uterus has been restored to a healthy condition.

The Small Acute Uterus.—The same technique is employed, but if complicated by

salpingitis or peritonitis a few drops only of glycerine are given. The procedure is as follows : The cervix is washed out with 2 c.c. of glycerine. The syringe is refilled and the catheter pushed gently up to the fundus of the uterus ; the catheter is then withdrawn, leaving a layer of glycerine on retirement. This small quantity seems to be sufficient at first to initiate drainage, whereas a large quantity injected would be likely to set up pain. As the days go on the uterus becomes less sensitive and a little more can be injected into the uterus.

The Small Chronic Uterus.—Erosion with menorrhagia. Erosion with metrorrhagia.

Erosion with Menorrhagia.—Here the treatment is commenced on similar lines to that of the acute uterus. The patient is anæsthetized and the uterus thoroughly washed out with 100 c.c. of glycerine. Daily treatment is continued for a week and the patient returns for bi-weekly treatment until the erosion has healed. This intensive treatment seems to save time. It undoubtedly reduces the number of days of menorrhagia.

Erosion with Metrorrhagia.—Here the treatment differs. Owing to chronic inflammation the mucous membrane becomes hypertrophied, and dilatation and curettage will be necessary before glycerine injection. It need hardly be mentioned that in cases near the menopause the curettings should be examined microscopically for carcinoma.

In considering the indications for treatment it is probable that many will think the number too high, but it is becoming more evident that prophylaxis will have to be practised to a greater extent than hitherto. In a large number of cases definite signs of inflammation exist during pregnancy which require treatment not only during that period but also in the puerperium until all signs of inflammation have subsided. A definite line of attack has been instituted during pregnancy, following delivery and in the puerperium, which bids fair to definitely prevent or control sepsis.

ANTE-NATAL PERIOD. (I) THE TOXÆMIAS.

The source of the origins of the toxins evolved during pregnancy appears still to be in doubt, but as a result of absorption of these toxins two types of cases are known to arise :—

(1) Those cases in which vital organs—e.g., the kidneys, liver and brain—are affected and which may end in eclampsia.

(2) Those cases in which the uterus is more directly affected and which may end in hæmorrhage as accidental hæmorrhage.

In both types of cases it is becoming increasingly evident that most cases of toxæmia show signs of uterine sepsis during the puerperium. In the few cases which we have had the opportunity of examining, erosion of the cervix appears to be the common lesion. The writer suggests that for the present it should be taken that the uterus is the origin of the toxæmia and that treatment should be meted out to this organ. In the last seven cases of severe toxæmia where the patients have reached the limit of intoxication induction by the glycerine method has been carried out with success. The technique is as follows : The patient is placed in the lithotomy position (after anæsthetizing if necessary). The external parts are washed with ether soap and water and normal saline. The cervix is exposed in the usual manner. The vagina is swabbed with glycerine. A number 12 terminal-eyed catheter, marked in inches, is attached by a glass connection to a rubber tube. The catheter and tube are filled with

glycerine and the catheter is gently inserted for a distance of 6 in. into the uterus between the membranes and uterine wall. During the introduction of the catheter glycerine is continuously injected through it in order to facilitate its progress. The catheter is left *in situ* and 50 c.c. of glycerine are injected every hour until the onset of labour pains. The time from induction to the onset of labour varies within wide limits, being from nine to forty-eight hours in our cases. Morphia $\frac{1}{4}$ gr. is given at night and the patient sleeps, the glycerine injection being continued every hour without disturbing the patient.

This method of induction has the advantage that constant drainage is kept up while the catheter is in the uterus.

(2) *Bacilluria*.—In cases of bacilluria it is generally found that the genital tract is affected as well. The cervix should receive treatment during pregnancy, in addition to the usual treatment of the condition, and intra-uterine glycerine should be given after labour.

(3) *Erosion of the cervix* is the one condition *par excellence* that the uterus is entering labour with a definite septic focus. Erosion should receive treatment during pregnancy and directly after labour, and subsequently until it has healed. The writer is convinced that ante-natal treatment of erosion is one of the principal means of preventing miscarriage, and later, carcinoma of the cervix.

Labour: (1) *Internal Manipulation*.—In every hundred maternal deaths, 80 per cent. of the cases have had internal manipulation. A thorough irrigation with glycerine 200 c.c. is carried out in every case where there has been internal manipulation in the practice of this hospital.

(2) *Retained Placenta*.—Half-hourly injection of 100 c.c. of glycerine does certainly aid the expulsion of the placenta.

(3) *Postpartum Hæmorrhage*.—Intra-uterine injections of hot water are being superseded by injection of glycerine.

POST-NATAL PERIOD.

Treatment must be continued periodically to the uterus in those cases in which sepsis has been detected during pregnancy.

Pyrexia.—It now seems safer to commence glycerine treatment before the temperature rises to 100.4° F. as it has been proved that valuable time may be lost. In the practice of this hospital treatment is instituted when temperature 99° F. and pulse 90 are recorded.

There is a type of case which seems to be neglected, namely, that type of case in which broncho-pneumonia sets in early in the puerperium. This is often assumed to be a complication and the uterine condition is left uninvestigated. In the practice of this hospital the uterus is treated as well as the pneumonia and the cases have shown remarkable results. Treatment is carried out at the edge of the patient's bed in order to disturb her as little as possible.

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