previous infection. The very frequent acute processes occurring in the course of quiet chronic gonorrhea often can be quickly cleaned up under any treatment, even with internal use of the balsams alone.

To sum up, the writer believes thoroughly that all cases of early acute gonorrhea except in the presence of some contra-indication (such as phimosis or acute folliculitis) do better under active irrigation which in itself much reduces the severity of the disease, and he believes that the "organic" silver preparations used not alone but in combination with profuse bland irrigations accomplish definite results by germicidal action.

By following out a routine based on this, varied to suit varying cases, we can effect a very rapid cure in a certain proportion of cases, a very considerable diminution of time of treatment required in the other cases, a very comfortable condition as to symptoms during the course of treatment and, by no means least, the most efficient limitation as yet possible of the area involved as well as of the duration, and hence the best chance for avoidance of complications and chronic processes.

GLYCOSURIA IN PREGNANCY.*

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BLUT in 1856 found a physiological glycosuria in the urine of all women at the lying-in period, in all nursing women, and in a certain number of pregnant women. Sugar was present in amounts as high as 8 gr. per 1,000 cc. of urine. He did not state the kind of sugar found, and it was not until 1877 that Hofmeister demonstrated it to be lactose. Since that time many observers have noted the existence of glycosuria in this class of cases and have brought forward different theories to account for its presence. Brocard in 1898 found a temporary glycosuria in 60 out of 125 cases of pregnancy between the seventh and ninth months, the varieties of sugar being glucose and lactose. Marie des Bouvenes in 103 pregnant women out of 353 examinations found 109 positive glucose reactions, or about 40%. Commandeur and Porcher recently found glycosuria present in twenty cases just prior to delivery. Very frequently the proportion of sugar found was so small that ordinary methods of determination were not always delicate enough to demonstrate its presence.

Brocard thought the glycosuria due to a disturbance of general nutrition. Charrin, his co-worker, suggested that the excess of fat in the liver of pregnant women might explain this tendency. Commandeur and Porcher in a recent article upon the subject maintain that the uncertainty of the physiology of the breast has been the difficulty in determining the cause. They state that from the experiments of Paul Bert in 1884, which

they have since confirmed, it has been definitely proven that glucose, which is made in the liver, is transformed in the breast into lactose. This process increases as lactation appears. When there is an excess of glucose in the liver or when the breast is not ready for action this excess of glucose is thrown into the blood and appears in the urine. Then there is a temporary glycosuria which may occur from various causes as fright, injuries, nervous conditions, creatinine and its bases febrile attacks, acute diseases, action of certain toxic substances, ingestion of saccharine foods, anesthetics, and others. Pathological glycosuria is due only to the condition known as diabetes mellitus. In this condition glucose is present in quantities from $\frac{1}{2}$ to 10%. The urine is increased in quantity and possesses various properties which are recognized as being associated with that disease.

The relation of glycosuria to pregnancy is an interesting one and a number of cases of this condition have been collected. It has been possible to divide the cases into two classes:

(1) Showing a temporary glycosuria during some part of the pregnancy where no other symptoms existed, where the glycosuria was small in amount and varied but little; and

(2) Showing a glycosuria present where the amount was larger with a tendency to increase, and where other symptoms existed.

Through the courtesy of Dr. Geo. M. Craigin of Boston and Dr. Ingalls of Hartford, Conn., we are able to report three recent cases of glycosuria in pregnancy and we desire to express our thanks to them here.

(1) CASE OF DR. GEORGE A. CRAIGIN. Primipara; thirty; family history negative. Always well, robust physique, accustomed to considerable exercise and a hearty eater. Last catamenia May 8. Urine examination negative up to Dec. 29. Urine examination, Dec. 29, 1,036; alb., 0; sugar, faint trace. General condition, excellent; fetal heart, strong; 140.

Jan. 5. 1,036; alb., 0; sugar, .25%.

Jan. 10. 1,023; alb., 0; sugar, .42%; urea, 350 grains.

Was well save for slight indigestion. Walked several miles daily.

Jan. 20. 1,031; alb., 0; sugar, .42%.

Jan. 22. Put on rigid diet.

Jan. 28. Alb., 0; sugar, .22%.

Feb. 15. After difficult breech labor was delivered of an eight-pound girl. Patient has been well since delivery. At no time since delivery has sugar been discovered in the urine. The child died on the third day with convulsions. This death was probably due to the difficulty in delivery.

(2) CASE OF DR. INGALLS. Primipara; thirty; seen when six months pregnant. Was suffering considerably from pruritus. Three per cent sugar was found in the urine. Labor was induced with catheter. Pruritus disappeared and urine was sugar free soon after uterus was emptied.

(3) CASE OF DR. J. M. JACKSON. Primipara; twenty-seven; last catamenia June, 1902. First seen by Dr. Jackson Dec. 31. Urine was said to have been examined prior to this time and no sugar was found.

Dec. 31. Urine examined: Twenty-four degrees, amount 1,500 cc.; 1,028; alb., 0; sugar, 4%; urea, 24 gms. No acetone or di-acetic acid.

* Read before the Obstetrical Society of Boston, Oct. 25, 1904.

Has been perfectly well during pregnancy except for slight nausea and vomiting during early months. Put on strict diabetic diet, and by the end of one month was sugar free. Feb. 25, 1903, urine examination showed no sugar.

Early in March had severe headache, but did not call her physician. March 12 complained of great fullness in the head and throbbing pains in the temples. When seen at this time pulse was very high, tension estimated at 250 mm. Hg.

Five grains of phenacetin relieved her condition and she slept until 10 P.M., when her membranes ruptured, and a large amount of liquor amnii escaped. Labor progressed slowly all night; at 12 noon, the next day, she began to tire; os was size of one dollar, easily dilatable and head was in the pelvis. Ether was given, the dilatation completed, and an easy, low forceps operation done. The placenta was adherent and had to be removed manually; no hemorrhage, and the uterus contracted well. Aseptic ergot given subcutaneously after the extraction of the placenta.

Patient began to come out of ether and pulse dropped from 140 to 120 and was of normal tension. One hour later her pulse suddenly increased in rate, became feeble and patient sank into a profound collapse. In spite of stimulation she became delirious and died in about one hour. The child was alive. The question would at once be raised of rupture of the lower uterine segment, but the interior of the uterus was carefully examined at the time the placenta was removed and no such condition existed. Shock of operation could be eliminated as she was under the ether but a few minutes and the delivery was not a difficult one. The heart had been examined several times previously and found normal. Certainly, there were no symptoms at any time pointing to any cardiac trouble.

(4) CASE REPORTED BY LEIPMAN. Seventh child; thirty; had excessive enlargement of the abdomen, swelling of the feet, dyspnea, sugar present in the urine in considerable quantity. The membranes were ruptured at this time and eleven pints of fluid escaped. Fifteen minutes later a large blood clot came away. An internal podalic version was done and child extracted. The patient suffered much from shock, and as the hemorrhage was extensive the uterus was packed. No sugar was discovered directly after delivery, but when the gauze packing was removed, sugar reappeared and patient died in coma. Autopsy showed a dissecting endometritis, the connecting tissue being necrotic while the uterine muscular fibres were intact.

As regards diabetes in pregnancy Duncan in 1882 first reported twenty-two pregnancies occurring in fifteen women between the ages of twenty-one and thirty-eight years. From these cases and their subsequent histories he concludes:

(1) Diabetes may come on during pregnancy.
(2) Diabetes may occur only during pregnancy, being absent at other times.

(3) Diabetes may cease at the termination of pregnancy, recurring later.

(4) Diabetes may come on soon after parturition.

(5) Diabetes may not return in a pregnancy occurring after its cure.

(6) Pregnancy may occur during diabetes.

(7) Pregnancy and parturition may be apparently unaffected in their healthy prognosis by diabetes.

(8) Pregnancy is liable to interruption, probably always by the death of the fetus.

In reviewing the literature one is struck by the infrequent occurrence of diabetes in pregnancy; also the fact that many of the reported cases were not discovered until near delivery or afterwards when the disease was far advanced. This last fact shows the importance of making systematic urine examinations in all of this class of cases.

Several reasons are given to account for the infrequent occurrence of diabetes as a complication of pregnancy among which are: That where diabetes occurs in women in two thirds of the cases the disease does not make its appearance until after the menopause. Diabetes occurring in young women causes, as a rule, suppression of menstruation and numerous lesions of the genital tract which tend to prevent conception. In case conception does occur miscarriages are frequent.

As regards prognosis Fry states that the unfavorable prognosis of diabetes is increased by the co-existence of pregnancy, mild cases assume acute forms and acute rapidly terminate. The authors have collected from the literature eighteen pregnancies occurring in eight women who had a mild glycosuria present at some time during the pregnancy. The glycosuria showed little tendency to increase and was accompanied by no further symptoms. All of these eighteen went to delivery at term, there was no difficulty with the labor and convalescences were normal. No sugar was present in subsequent examination.

Where diabetes existed as a complication of pregnancy there were thirty-six pregnancies occurring in twenty-five women. Of these twenty-five women, sixteen or 45% died either at delivery or within a short time, of diabetes or some complication. Twenty or 55% of the infants were stillborn or died within a few hours. In seven of the cases who recovered after the first pregnancy diabetic symptoms recurred at the second pregnancy and three died at delivery. In four others diabetic symptoms reappeared in the second and third pregnancies, and three of this four died at the third delivery. In the fourth diabetic symptoms persisted after delivery. With reference to the effect on the fetus abnormal births were either miscarriages — which occurred most commonly at the third, fifth and seventh months — stillborn or macerated. Excessive size of the child and hydramnios were noted in several cases. Malformations occasionally occurred among which were spina bifida, hare lip, cleft palate, double hydrocele. *Thus it is seen that diabetes frequently exerts a pernicious influence upon the product of conception.

As regards the effect of anesthesia, Naunyn states that coma and death are not infrequent, and in all cases narcosis was to blame. He states that there is always a large increase of sugar after operation, the amount ranging from nothing to 7%. He reports a case of ten minutes' narcosis followed in six hours by coma and death

within forty-eight hours. The cause of the coma is not known.

Noble has collected sixty-nine cases of operations upon diabetics for various surgical affections; all of these took the anesthetic well; an occasional exacerbation of sugar was noted, but in no case did death occur which could be directly attributed to the anesthetic. Pavy states that anesthesia of diabetics is unsafe if much sugar is present; he advises strict diet, the choice of an anesthetic to lessen the chance of excessive post-operative vomiting, and to make the anesthesia as short as possible.

Partridge states that fatal coma or collapse has been observed to follow unusual bodily or mental strain in diabetics. Labor is a great strain, and this complication unquestionably increases the risk of operation. Sudden death and coma occurred in two of the reported cases, and of eight cases seen in the literature four died shortly after operation. From these cases it would seem best to avoid the use of anesthetics as far as possible.

As regards blood pressure there is nothing especial of note, except cases showing arteriosclerosis as a result of diabetes; these cases show a slightly increased blood pressure. Mention should be made of the fact that a high blood pressure always precedes coma.

In conclusion we would call attention to the importance of a systematic examination of the urine of all pregnant women. A low specific gravity does not prevent sugar being present; with a low specific gravity and low solids sugar is frequently met with in the urine.

A temporary glycosuria frequently exists during the later months of pregnancy; this may be due to either glucose or lactose, and the recent work of Commandeur and Porchet have demonstrated the fact that this is surely physiological and that these cases go on to the termination of pregnancy without interruption. Undoubtedly many cases of this class have been reported as cases of diabetes in pregnancy.

Where a glycosuria exists due to glucose, and where the amount of suagr is variable, and where other symptoms of diabetes exist, when diacetic acid or acetone appear in the urine, the interruption of pregnancy is advised for the possible benefit to the mother.

On account of liability of sudden collapse the use of anesthetics should be avoided as far as possible.

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I. K. I. METHOD OF STERILIZING CATGUT.

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HAVING employed the I. K. I. method of sterilizing catgut for over a year, and having had during that time no wound break down, and only one stitch-hole abscess, I wish to give my experience in its preparation and use.

In every instance brought to my notice where this method has been criticized I have found the user and not the method at fault. Like every other method, it must be done exactly right, or it will not do what is claimed for it. One physician allowed his nurse to make the solution, and had nothing but trouble with the gut that had been soaked in it. Another had the solution put up by a second-rate pharmacist, with the experience of the one above mentioned. Another simply coiled the gut, and found fault because it had lost its strength.

First of all, get clean, strong gut. This is essential whatever method of sterilization you intend to employ.

At the present time, clean, strong gut of uniform size can be obtained. The gut I have used for years is almost white, has no odor, and is free from fat. It is made in Germany, but where my supply agent gets it, I do not know.

Before sterilization, no matter what process is employed, each strand of gut should be thoroughly stretched. In the I. K. I. method of sterilization, the gut should be wound on wide reels if possible, and too much gut must not be put on any one reel. In other words, the solution should find easy access to the deeper layers of gut. The gut *must* be wound on some form of spool or reel, else the method will prove a failure. Gut, being strands of some kind of intestine twisted into a fine cord, allowed to dry, and then polished, will untwist and thus lose its strength if put in any watery solution, unless it is wound on a spool or reel.

Before using, the gut should be swashed through sterile water — not allowed to soak in it. The reel or spool can then be placed on a sterile sponge or gauze, and when the operation is finished, dropped back into the common jar, to be used at the next operation.

The advantages of this method are the absolute certainty of a sterile gut, ease of preparation, healing by first intention and an animal suture material that will not slip and that will tie like silk.

The solution is: iodine, one part; iodide of