

OBSTETRICAL TECHNIQUE IN THE MATERNITY
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I.

TECHNIQUE OF MANAGING THE CHILD-BEARING PROCESS.

a. The woman, on admission, is given a full bath, her street clothes are taken away, and she is provided with a wrapper, which she wears about the hospital. At the time of falling in labor she is moved from the ward on the second floor, given a general bath, paying especial attention to scrubbing the genitalia, her bowels thoroughly cleaned out by an enema, and she is put to bed in one of the delivery rooms, in one of the wings of the hospital. In bed, her buttocks rest upon a pad, which has been previously sterilized.

b. The Conduct of Labor.—All water used for douches or solutions comes from the sterilizers, where it has been filtered and boiled. The antiseptic solutions used are bichloride of mercury, 1-1000, and creolin, 2 per cent. This latter is used for douches. Pledgets of cotton, soaked in 1-1000 sublimate solution for at least one-half hour before use, are used to wipe away any contaminating discharges. The number of *vaginal examinations* is as limited as practicable, when students are in attendance. The resident physician in charge and the students in attendance all wear sterile muslin operating gowns, and prepare their hands and forearms as follows:

1. Scrub for ten minutes *by the clock* with tincture of green soap and hot water, using a stiff nail-brush, and changing water every three minutes.
2. Scrub for one minute in benzine, using a fresh brush.
3. Scrub for one minute in alcohol.
4. Immerse hands and arms in a 1-1000 hot sublimate solution for two minutes.

Vaginal examinations are always made with the genitalia of the patient exposed, so that the finger, anointed with carbolyzed vaseline, can enter directly into the vagina without being otherwise soiled. These examinations, always as few as possible, are made from time to time.

to note the progress of labor. For subsequent examinations it is not necessary to scrub the hands for the full ten minutes, two or three minutes being sufficient. When the head descends on the perineum, should any feces be expressed from the rectum, the mass is immediately wiped away by a pledget of cotton soaked in 1-1000 sublimate solution, wiping in a direction from before backwards.

When the child's head is born its eyes are wiped off with gauze soaked in boracic acid solution, and two drops of a 2 per cent nitrate of silver solution are instilled in each eye, as a prophylactic against ophthalmia. When the child is entirely born, the cord, when pulsations have ceased, is tied with sterile tape and cut. The placenta is expressed by Credé's method. The woman is then given a douche of 2 per cent creolin, and her abdominal pad and binder applied. The vulvar pads, used to absorb the lochia, are made of carbolyzed gauze and salicylated cotton, and are changed as often as may be necessary. Any instruments necessary in the delivery of the woman are boiled for at least fifteen minutes in soda solution. Should the application of forceps or any other obstetrical operation be necessary, the vagina and external genitals are thoroughly scrubbed with pledgets of cotton and tincture of green soap, and a douche of 1-2000 sublimate solution is given.

II.

TECHNIQUE OF ABDOMINAL SECTIONS REQUIRED FOR OBSTETRICAL COMPLICATIONS.

Preparation of Patient.—At 4 p. m. on the afternoon preceding operation the patient's abdomen, from ensiform to symphysis and flank to flank, is scrubbed with a brush, tincture of green soap and hot sterile water, for ten minutes. The nurse who attends to this has prepared her hands and arms as described in Section I, and wears a sterile gown. Particular attention is paid to the umbilicus, and the hair on the mons veneris is shaved. At the end of ten minutes the soap is washed off with sterile water, the abdomen is scrubbed with alcohol for one minute, and a wet dressing of gauze saturated in 1-2000 sublimate is applied and held in place by a binder. The dressing should be large enough to cover the whole area scrubbed. That night the patient is given 3ss of magnes. sulph. at 9 p. m. On the morning of the operation she is given no breakfast, her abdomen is prepared as was done the day before, with the addition of scrubbing with benzine for one minute before the alcohol scrubbing. The dressing now

applied is removed only on the operating table. The binder used to hold this final dressing in place should be furnished with perineal straps to prevent riding up, and so exposing the field of operation. No further preparation of the abdomen is given. The woman is given an enema about half an hour before the time set for operation, and is catheterized immediately before etherization. When the patient is completely etherized, a stream of oxygen is introduced under the gauze, one end of the rubber tube conducting it being inserted in the patient's nostril.

Preparation of Operator and Assistants.—The operator and his assistants wear sterilized suits, consisting of cheviot shirt and duck trousers, and also wear rubber-soled canvas shoes. They prepare their hands and arms as given in Section I. When this is completed they put on sterilized muslin operating gowns and also sterilized muslin caps, to prevent contamination from their hair. In any septic case, they also use seamless sterilized rubber gloves.

Instruments, Dressings, Sutures, etc.—The instruments are boiled for one-half hour in soda solution. The dressings are all sterilized by superheated steam, in a cage which is placed in an autoclave at a temperature of 240° F. for 45 minutes.

The cage is packed as follows, from below upwards: 1 abdominal binder, 6 large square pieces of absorbent cotton, 12 large pieces of gauze, 12 towels, 2 tubes of silk, 1 glass tube filled with 3-inch gauze bandage, and 1 filled with 6-inch gauze bandage for use in packing, 4 sheets, 3 gowns, 3 caps, 6 nail-brushes, and bundle of tooth-picks to use as nail-cleaners. The cage is then closed, pinned up in a sheet and sterilized in the autoclave for 45 minutes, at a temperature of 240° F.

Ligatures.—The material used for ligatures is Tait's Birmingham silk, the heavy and fine sizes. It is cut in strands 30 inches in length, rolled on glass spools, 3 strands to a spool, and packed in glass tubes, 2 spools of heavy and 1 of fine silk to a tube. These tubes are stoppered with cotton, sterilized in the steam autoclave at 240° for 45 minutes, then dried out in a hot-air oven. They are then resterilized with the cage of dressings, as needed.

Sutures.—The suture material used is: (1) *Formalin catgut*; (2) *silk-worm gut*; (3) *fine silk* (as above). The *silk-worm gut* is boiled in the instrument tray with the instruments.

The *fine silk* is prepared as above.

The *catgut* is prepared as follows:

The sizes used are 1 (fine) and 7 (heavy).

1. Cut the strands 30 inches long.
2. Soak 12-24 hours in benzine.
3. Dry out on blotting paper, protected from dust.
4. Roll loosely on spools and soak for 24 hours in a 4 per cent watery solution of formalin.
5. Rinse off excess of formalin in sterile water.
6. Dry out; stretched on frame for 3 or 4 days, protected from dust.
7. Roll on wooden spools, 3 strands of each to a spool.
8. Place spools in special metal tube, with screw cap, containing enough 10 per cent solution of glycerin in absolute alcohol to entirely cover the spool.
9. Sterilize in autoclave for 45 minutes, at 240°. This form of catgut lasts 14-17 days before being absorbed.

Pads.—The pads used as sponges are made of several thicknesses of gauze, sewed down around the edges. They are put up in packages of 15. One large intestinal pad, 16 in. square; 7 medium and 7 small. Two of these packages are sterilized in the autoclave for each operation.

Drainage.—Should drainage be required, a glass drainage tube is used, and gauze packed around it. The tube comes out through the lower angle of the wound, and its lower end is in Douglas' pouch. The gauze is removed at the end of 24-48 hours. The accumulated fluid is sucked out through the tube by a long-nozzled syringe every 24 hours, and the glass drainage tube is finally replaced by a rubber one, which is shortened as the sinus heals from the bottom.

Closing the Abdomen.—The abdomen is closed as follows:

1. Peritoneum united with fine catgut.
2. Two or more splint stitches of silk-worm gut through everything down to the peritoneum. These are not tied at once.
3. Fascia united with heavy catgut.
4. Fat united with fine catgut.
5. Skin united with a cutaneous stitch of fine silk.
6. Splint stitches tied.
7. Skin stitch tied.

The wound is dressed with dry gauze, absorbent cotton over that, the whole completely covered in with strips of adhesive plaster and a binder.

After-treatment.—Nothing by the mouth for 24 hours. Then milk $\mathfrak{z}$ i, limewater $\mathfrak{z}$ i every hour for 3 hours. Then increase the milk $\mathfrak{z}$ i

every hour, leaving the limewater stationary, until milk $\bar{z}i$, limewater zi every hour is reached. After 12 hours increase to milk $\bar{z}ij$, limewater zij every 2 hours, and so on at intervals of 12 hours, increasing the milk $\bar{z}i$ and the limewater zi each time, and preserving the feeding intervals at 2 hours. After the first dressing, at the end of a week, the patient is put upon soft diet. The bowels are moved at the end of 36 hours by an enema of magnes. suph. $\bar{z}ss$, turpentine $\bar{z}ss$, glycerin $\bar{z}i$ and water q. s. ad $f\bar{z}vj$.

The first dressing is removed at the end of one week. The skin stitch is now removed, and the wound redressed as at first, except that surgeons, yellow adhesive plaster is used instead of the rubber adhesive plaster. The wound is now dressed every other day. At the second dressing the splint stitches are removed. The dressings every other day are continued until the woman leaves the hospital. If any infection of the wound has occurred or if drainage was used, the patient is, of course, dressed every day. Stimulants are used as necessary in each particular case.

III.

TECHNIQUE OF IMMEDIATE REPAIR OF LACERATIONS.

Lacerations of the birth canal are repaired at once, except possibly those of the cervix.

Cervix.—When the repair is undertaken at once, the cervix is grasped in two double tenacula, and the stitches of silk-worm gut passed as in an ordinary Emmet operation. They are left in for two weeks.

Incomplete Lacerations.—An anesthetic is unnecessary, if the operation is undertaken at once. The patient is placed in the lithotomy position. A mounted curved needle with the eye in its point is inserted about one-fourth inch from the edge of the tear in the perineum, just opposite its upper edge. The needle is swept out to secure a good grip of the levator ani, is passed around to the other side, keeping behind the limits of the tear, and is brought out at a point corresponding to the point of insertion on the opposite side of the tear. It is then threaded with silk-worm gut and withdrawn. The next stitch is begun at a point one-fourth inch lower than the first, but is passed in the same way, and as many as needed are inserted, usually three to six. The sutures are either tied or shotted, and left in position two weeks.

Complete Laceration.—An anesthetic is necessary. The torn ends of the sphincter are caught up with tenacula, and two silk-worm gut

sutures are passed through them from the rectal side. The tear in the recto-vaginal septum is then repaired with either silk-worm gut or formalin catgut sutures, also passed from the rectal side. A barrier stitch of silk-worm gut is then inserted, entering just above the anus, skirting the whole extent of the rectal tear, and emerging at a corresponding point on the opposite side. The torn perineum is then repaired as if it were an incomplete laceration. All stitches placed in the rectum have their ends long enough to hang at least one inch outside the anus. The bowels *must* be kept in a liquid state after the operation; the stitches are removed in two weeks.