

moval of tubal and ovarian abscesses where tubal drainage had been used; but have never seen such follow the more thorough coffer-dam drain, a very clear distinction between fertility of kinds of drainage. The most thorough abdominal surgery in peritonitic and pus lesions cannot be done without a thorough working knowledge of gauze drainage.

To speak of gauze drainage as a mere "pus poultice" and condemn it as a drain in the critically ill peritonitic patient, is as void of surgical wisdom as fashion is void of philosophy.

241 NORTH EIGHTEENTH STREET.

A BRIEF FOR THE USE OF IODINE IN THE PREPARATION OF WOMEN FOR DELIVERY*

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ALL obstetricians are in agreement that it is essential to obtain, in so far as possible, an aseptic field for delivery, whether the patient be in a hospital or in her home. There is no question about the wisdom of minute and painstaking care in the effort to prepare such a surgically clean field; there is a question as to the best method of preparation, and there are a number of methods employed.

The object of this paper is, not to inquire into the various forms of technic, as concerns the attending physician, the nurse, the room in which the woman will be confined, or the various and sundry draperies used with which to surround the patient, but to deal with the manner of preparing the patient herself, holding a brief for the use of iodine as a safe, simple, and efficient antiseptic for this purpose.

Anything that simplifies the means for obtaining a desired and desirable end, provided that end be reached with as great efficiency, is an advance in the right direction, and if such, deserves adoption. Any one who has thoughtfully observed the preparation of a patient for delivery by the most universally used method of scrubbing with soap and water followed by the pouring of various solutions from pitchers over the abdomen and thighs, must admit that the employment of iodine is simpler. Observe critically the process of scrubbing. The woman lies on her back, usually with thighs drawn up, her abdomen and thighs towering above the birth area. The nurse, or interne first thoroughly scrubs the thighs, abdomen, pubes, vulva and ischiorectal regions. Sometimes an effort is made to protect the vulval area by holding a pad over the vulva with one hand while scrubbing with the other, this precaution, however, is not always taken and is fallacious at best. As the nurse scrubs and works up suds, these suds contain the mixed

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and accumulated filth that lies upon the skin of all the above mentioned surfaces. Holding a piece of gauze as a wash cloth, the rotary motion of her hand when it passes over the vulva, is bound to force some of these suds in between the labia. Where an effort is made to protect the vulva, even then these suds find their way under the protecting pad as can be plainly seen when the pad is removed, just prior to the pouring of the solutions over the patient. Having finished with the scrubbing, a pitcher of sterile water is next poured from above, and the suds, containing macerated epithelial cells, hair, rectal mucus, particles of feces, and bacteria innumerable are carried with a gush, down the hill from the thighs and down the hill from the abdomen into and through the natural drain formed by the gutter-shaped space between the labia majora. No multiparous outlet is so tight as to exclude this sudden freshet, and few nulliparous ones! With the woman lying on her back, the vagina slopes downward and backward, again favoring the reception and final deposit in the cul-de-sac, around the opening ós (possibly into the lower uterine segment itself), of material scrubbed from the lower abdomen, thighs, vulva and anus. Following this, a pitcher full of some mild antiseptic is poured over the parts, and the patient then draped.

There is a significant difference between the preparation of a patient for delivery in the above manner, and that of a patient for some vaginal or cervical surgery, in that, in the latter, *after* the scrubbing and pouring, the vagina itself is scrubbed and douched, and sometimes painted with iodine. I believe it is an established fact that vaginal douches before labor are not indicated, except in the presence of known infection, and if used as a routine would no doubt be productive of more harm than good; therefore, to make use of them after the external cleansing, would not only add a more involved technic of preparation, but also would be a step backward.

The above described procedures require some little time, and the providing of several solutions, as well as causing a good deal of inconvenience to the patient, more work for the nurses, and as usually carried out, does not seem to me, *safe*. I have seen women so prepared in various clinics and think I have given a fair and accurate description.

Let us in comparison examine the method of iodine preparation. The patient is given an enema as soon as she enters the hospital, or if at home as soon after she falls into labor as possible. The anal area is then carefully cleansed, a clean vulval pad applied and the patient is not disturbed with any more ablutions. When well on into the second stage, about the time when she is ready to be put to bed for delivery, the pubes and labia are shaved, using benzine as a softening agent. When the head is markedly distending the vulval ring, probably half a dozen pains before emerging, the obstetrician himself, carefully

paints the vulva, the iodine extending well over the mucus membrane. Particular attention is given to the crevices around the clitoris. Next the skin over the pubes and lower abdomen, the inner sides of the thighs and last, the perineal space, the buttocks and the anus. He then so disposes the sheets and towels that the only surfaces left exposed are those that have been thoroughly painted with iodine. This takes about two minutes, and the patient is, as a rule, sufficiently under an anesthetic at that time to be unconscious of any discomfort. The two occasional disadvantages of this preparation are: sometimes the patient is not anesthetized, or only slightly so, and she will complain of burning. This soon passes or becomes so slight that no more complaint is heard. The other disadvantage is, if one is not careful to use a solution of the tincture weaker than the ordinary pharmacopeial strength (7 per cent), a mild iodine burn will sometimes result: none of those that I have ever seen have caused much discomfort. It is not well to use a solution stronger than one half the regular strength, this is easily obtained by mixing equal parts of alcohol and the U.S.P. tincture. We must admit that this latter procedure is the simpler, and that it is safe. Now as to its efficiency.

Recently I have been taking cultures when the patient had been prepared by iodine as outlined above. The swabs were rubbed over both labia, across the pubes, in the crevices around the clitoris and across the perineum before delivery, and another swab over the same surfaces, after delivery of the placenta and any repair work that may have been needed. These were implanted on slant agar tubes and incubated for 48 hours. Thus far there have been 29 cases, the tubes showing no growth in any except one and that was a mould, the pathologist reporting that it was probably air implanted. I have not made any control cultures from cases prepared by the scrubbing process, these were cases from private practice and are too few from which to draw positive conclusions, but they show an excellent percentage of surgically clean fields, and the method seems worthy of further use.

If we are careful to see that other points in technic, such as the wearing of sterile gowns, caps and mouth protectors, using as much care as possible to avoid rectal contamination, if we further familiarize ourselves with diagnosis by abdominal palpation and rectal examinations, we will have made long strides forward in the safe delivery of the pregnant woman, and the next ten years will show a more hopeful lowering of puerperal morbidity and mortality than the last ten. With the problem of a clean delivery settled, there still remain the problems of those cases having remote foci of infection somewhere within the body, those receiving the infection through the vagina during the last few days of pregnancy, and those infected during the puerperium.