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THE ADVANTAGES OF ANTISEPTIC IRRIGATION  
OF THE PARTURIENT CANAL BEFORE  
AND AFTER LABOR.

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"To avoid danger is a thousand times wiser than to prepare to meet it."

Prompted and emboldened by this thought, I present for consideration and discussion the advantages to be gained by the employment of ante-partum and post-partum vaginal irrigation.

Having accepted as proven the rôle which micro-organisms and their products, ptomaines, play in the development of disease, it has been my practice for the past two years to employ, in cases of confinement, irrigation of the parturient canal.

The results from this routine method have been so uniformly satisfactory, aside from any theoretical considerations, that I would fain persuade every practitioner of obstetrics to give the plan an impartial trial.

While it has, I am well aware, no definite claims to novelty, yet the rules governing aseptic midwifery are so generally disregarded in private practice that further study cannot be otherwise than beneficial.

It is certainly a fact that strong antiseptic solutions containing mercury or carbolic acid are likely to, and will, if long continued, poison the patient. Garrigues, in his paper on "Corrosive Sublimate and Creolin," published in *The American Journal of the Medical Sciences*, 1889, reports twenty cases of death from this drug in obstetrical practice. But any valuable remedy will fail to give good results if not properly administered. Therefore, its abuse cannot be said in any way to militate against its use.

The method which has given me the best results consists in having the external parts about the genital region carefully and thoroughly scrubbed with soap and hot water with the onset of true pains.

This is followed by a second cleansing with 1 to 1000 bichloride of mercury solution, the final washing being with boiled water. This completes the toilet of the entrance to the vestibule of the birth-canal. As to the treatment of the canal itself, a fountain syringe is filled with one quart of hot, boiled water containing bichloride of mercury 1 to 5000. The ordinary nozzle made for vaginal use, after being rendered aseptic, is introduced into the vagina and carried up to the anterior vault of the canal, the stream of water having been running freely before introduction, to expel all air from the tube. When about half the solution has been used in bathing this portion of the vagina the nozzle is slightly withdrawn and made to enter the posterior pouch. In this way the whole mucous surface is irrigated, and at the same time some of the overflow bathes the cervix.

It is very desirable to finish this step in the procedure before rupture of the membranes, as their presence tends to prevent the escape of the antiseptic fluid into the uterine cavity and between the uterine wall and decidua. It will be noticed that so far our antepartum efforts at cleanliness have been principally confined to the vagina, and this is the point to which our attention should be especially directed, for the source of infection is far more likely to lurk here than in the pregnant uterus.

The vaginal douches are to be administered with the female in the semi-recumbent posture, in order that free drainage may be secured and no fluid permitted to collect behind the posterior margin of the vulva. The antiseptic irrigation is to be followed by a free bathing of the parts with boiled water, so that absorption of the mercury may be rendered impossible. By these means we run no risk of mineral poisoning, while we do secure a perfectly aseptic condition of the birth-canal.

When can we, without such precautions say, with any degree of certainty, This woman's birth-canal contains no gonococci or other noxious germs? Her family life may have been the purest in every particular, yet gonococci may be present. The occupation of the husband, as Laphorn Smith, of Montreal, has pointed out, through a lack of personal cleanliness, may infect his wife. Such occupations as scavenging, rag-picking, and the like, render a man especially liable to infection when the simplest rules of hygiene are neglected. The same author pertinently remarks: "Before labor begins we should disinfect the vagina of all women whose husbands have had gonorrhœa, taking it for granted that all have had it unless we have proof to the contrary."

Some writers, in spite of such facts, declare antiseptic irrigation unnecessary, because, they argue, Doderlein's experiments as to the nature of the micro-organisms found in the healthy vaginal canal prove conclusively that they are non-pathogenic; but I would make answer that what is harmless in a healthy vagina with a perfect mucous membrane is not necessarily so when its walls have been overstretched and are the seat of lacerations. The science of bacteriology has not yet declared the law that non-pathogenic micro-organisms always remain so under all conditions and circumstances.

Among those who are opposed to such prophylactic measures as I have suggested, may be mentioned Rosenberg, of the New York Polyclinic, who states in a paper published in the *Medical Record*, February 4, 1893: "So far, I have not said anything about the prophylactic vaginal douches, and I only wish to speak about them to condemn their routine administration. I do not believe that the vagina can be made sterile, no matter how much douching is done; but I do believe that infectious material is very frequently carried into the genital tract by dirty instruments or fingers."

Now it goes without saying, that if you are going to employ dirty instruments and fingers in your pseudo attempts at aseptic midwifery, you had far better avoid examining the patient at all. In fact, it would be wiser to secure someone else to take charge of the case. Therefore, such an argument is fallacious.

But what is still more surprising is that the same writer in his article should cite, in support of this view, several cases of puerperal infection in which the women died. They were supposed to have aseptic parturient canals, when in reality septic matter had been introduced by unclean midwives in their efforts to ascertain the female's condition previous to the arrival of the medical attendant.

Here we have a striking example of our inability to distinguish between an aseptic and a septic birth-canal. The life of the woman is thus risked unwarrantably when we have nothing but pure assumption on which to base our opinion.

Some extremists have gone so far as to recommend the employment of vaginal antiseptic injections as early as one week, or more, before the onset of labor, and they advise continuing them until the first stage is well advanced.

This is, perhaps, carrying the principal of antisepsis too far, but better that than not far enough. The importance of having an absolutely clean nozzle to the syringe, cannot be too forcibly impressed. Dirty tools can never be expected to do clean work.

Earle, in a paper published in the *Chicago Medical Journal and Examiner*, tersely remarks: "You cannot carry out intra-uterine injections with a half-ounce syringe and a goose-quill." Were the benefits arising from vaginal irrigation previous to delivery wholly included under the term asepsis, we might rest well satisfied, but that is not all, for the hot fluid fills a useful purpose in softening the cervix, thereby lessening the pain incident to its dilatation.

Some may urge against the practice, that it washes away the natural mucous secretion which is intended to lubricate the parts and facilitate the passage of the infant, but this is a theoretical objection which has no existence in fact. Quite the reverse one finds to be the case, which is confirmed by Garrigues, of the New York Maternity, who states, in a paper read before the Section on Obstetrics and Gynecology, in 1892: "Personally, I am opposed to rubbing and scrubbing the vagina, as some think necessary, but as to a vaginal injection before delivery, I believe yet, that it is useful. It will remove both dirt and microbes, and if, at the same time it removes a layer of mucous that lubricates the vagina, and, therefore, protects the perineum, it is easy to see that new mucus is poured out in abundance to replace the first."

With an aseptic parturient canal our fears of infection of the eyes of the infant, as it is driven along, are practically *nil*, for there is nothing to give rise to ophthalmia, that terrible disease so fatal to the sight. As my paper does concern itself with other necessary precautions, such as those relating to the clothing and the person of physician, nurse, and patient, no mention will be here made of them.

Having outlined the ante-partum procedure which would seem to recommend itself to the careful accoucheur, we have still for consideration some post-partum measures.

Whether the case has been one of natural or instrumental labor makes no difference; all must be treated alike, save the latter class will require extra care and attention, since the doors for the entrance of septic matter are more numerous and wider open.

No matter how skilfully one may have delivered the placenta and secundines, we never can know positively whether everything has been expelled. Let the examination of the placenta be ever so minute, a fragment may be left behind, or a shred of membrane that the eye of the attendant has failed to note the absence of.

Appreciating this fact, it is but fair to assume that there is in every uterus after delivery a cavity which contains material which, if it becomes infected, will place the patient in great danger. Micro-

organisms feed on dead tissue, and by their multiplication pour out ptomaines which, when brought into contact with living cells, cause their death.

Thus is formed the virulent poison which the vessels are ready to suck up and carry through the system. Let the source of the pathogenic organism be what it may, we do know that when it takes up its residence in the utero-vaginal canal it is a terrible enemy to do battle with. Therefore, it would seem but reasonable to institute prophylactic measures to prevent the entrance and development of these breeders of disease, which can best be accomplished by the employment of antiseptic irrigation.

Mercury in the form of corrosive sublimate is scarcely suitable for post-partum vaginal irrigation, since it is so readily absorbed by abraded surfaces. Hence, carbolic acid, creolin, boric acid, or peroxide of hydrogen are to be preferred. The advisability of resorting to irrigation immediately after labor is questionable, from the likelihood of inducing hemorrhage, introducing air or irritating fluid into the yet unsealed uterine sinuses.

After the lapse of twenty-four hours, however, I would recommend a vaginal douche of carbolic acid, one drachm to the pint, or creolin, one per cent., followed by an equal quantity of boiled water.

It would appear from a study of the clinical symptoms of puerperal infection, that the first manifestations occur on the third or fourth day; in other words, the lochial discharge in the first twelve hours is so free that no contamination by micro-organisms is possible, but on the second day, the discharge not being so abundant, the germs gain a footing, and after a lapse of twenty-four hours pour sufficient poison into the blood-stream to jeopardize the life of the female.

Earle quotes Bakelmann as deeming intra-uterine injections indicated when, forty-eight hours after birth, the temperature rises to 101.5° F. to 102.2° F., with frequent pulse, without a recognizable cause for it; also, when fragments of placenta and membranes remain in the uterus as a cause for disturbance, and when symptoms of infection of the endometrium are present.

Of course he does! Who would not, under such circumstances? But where is the wisdom of waiting until these disintegrating masses become infected before bringing about their expulsion? Why, indeed, delay in removing the oil-can, so to speak, from the neighborhood of the fire when experience unmistakably teaches us that it will explode if only left there long enough? Let us at least be reasonable,

and hasten with all judiciousness to place beyond reach the dangerous element.

If our knowledge of septic processes is worth anything, it surely ought to convince us that disintegrating organic matter has no place beside the living, and the wider the range of separation the safer for the individual. When we resort to vaginal irrigation at the expiration of twenty-four hours, we find the canal in a condition suitable for such a procedure. If the amount of carbolic acid does not exceed one drachm to the pint of warm water, and free drainage is secured, surely no poisoning is possible. Too much stress cannot be laid on the importance of having the female occupy a semi-recumbent position so that the escaping fluid may tend to gravitate toward the patulous vulvar orifice. The pressure by which the solution is forced into the passage should be as low as possible, the object being to irrigate rather than inject.

As is well known, when the woman lies on her back the discharges accumulate at the posterior and inferior portion of the vagina and form a pond well suited to become the feeding-ground for pathogenic organisms. By destroying this nest, which antiseptic irrigation accomplishes, we stop the production of ptomaines and relieve the system of further danger from infection. Appreciating, therefore, the great advantages and the increased safety to the parturient, can we do better than adopt for our motto in obstetrics, and carry out in practice—"CLEANLINESS FIRST, LAST, AND ALL THE TIME"?



