supposition that the egg cell of the mother or the spermatozoon of the father bore within them the taint, perhaps the veritable bacillus itself, or the homologon of a spore as one of the component parts of these elements.

CONCERNING VAGINAL INJECTIONS.¹

BY W. THORNTON PARKER, M.D. (MUNICH),

OF NEWPORT, R. I.

Almost every work upon gynecology acknowledges the importance of vaginal injections in the treatment of disease of the pelvic viscera, and at present it seems to be the general opinion that these injections must be received by the patient while lying on her back with elevated hips, if good results are to be expected.

The uselessness of the small stream attainable from almost every syringe is well known, and while Scanzoni has taught for so many years the necessity for copious injections, he has never supplied the apparatus. If we consult our works on gynecology, we will be surprised to discover the numerous syringes and appliances offered for vaginal injections.

So miserable, useless and even dangerous are the syringes supplied that Dr. Emmet has concluded that the only syringe worth using is the "Fountain," and "that no patient can use vaginal injections efficiently herself, but must have them administered by another."² For *this* vaginal injection the services of a nurse or servant must be employed, or else elaborate preparation of bed and bed clothing, and the many details connected with the operation must be carefully carried out. It is very interesting to consider the minute details and the complicated methods recommended by such writers as Thomas and Emmet, who are such giants in the practical operations which have revolutionized gynecological surgery. A collection of the descriptions for preparing patient and bed for recumbent vaginal injections is really astonishing, and in many cases one is forced to either devote a good hour to unravel the puzzle, or else to conclude that a patient once subjected to such fussy preparation *might* be willing to receive *one* such injection, but hardly a second. Indeed, to subject a nervous patient to such elaborate preparations is a miserable imposition, and is undoubtedly very often sufficient to discourage further interest in the progress of the treatment of the case. Such discouragement has indeed often put a positive stop to all further attempt at a case, and the woman of ordinary modesty feels outraged by the exposure necessary for the injection, which disturbs her much more than mounting the elaborate brass-mounted table so common in the offices of our amateur gynecologists.

The use of the vaginal syringe should be accomplished with as little annoyance to the patient as the simple operation of washing her hands or her face, and when this can be demonstrated, then, and not till then, will the bidet find its way for daily use in

countless homes, not as a preventative against conception, but as a precaution against disease. Thomas, however, opposes the sweeping assertion of Emmet, that vaginal injections received from a bidet are useless, and is willing to allow that some good can be derived from such injections, but in a limited, very limited, degree.

When we read on further in Dr. Thomas's work, and find that he recommends the common Davidson syringe, one cannot be surprised that his doubts are freely expressed as to the efficacy of vaginal injection. He has freely quoted Scanzoni in urging copious vaginal injections, and yet he must know that at present the average so-called female syringe is utterly unable to supply a sufficiently copious stream to be of any use whatever. The works of American gynecologists are all in error on this important topic, but if we consult the writings of Barnes and Edis we shall find that vaginal injections from the bidet, or even the common basin, are highly recommended and are frequently successful, because the syringes sold in England are mostly the admirable ones of Higginson, and not the useless apparatus found for sale in our drug shops. Few writers on gynecology have presented such a useful and practical book as that of Edis, on "Diseases of Women," and some of his remarks are so excellent that I take the liberty to quote them: "Syringes made of India-rubber are the most suitable; pewter or glass should never be used. . . . Higginson's syringe is one of the most convenient form. . . . The vaginal tube should be adjusted so as to lessen the force with which the fluid is injected, and prevent the possibility of the nozzle being inserted into the cervix. Instances of severe uterine colic, intense agony, peritonitis, and even death, from the employment of vaginal injections, have been recorded.¹ In some cases this may possibly be explained by the tube being inserted into the patulous cervix of a retroverted uterus. We cannot therefore be too careful in explaining to the patient how to use the syringe properly." Barnes asserts that "injections fail because they do not touch the main seat of the disorder, which in the majority of cases is in the uterus itself; but although they fail to cure, they may be useful as far as they go." He, however, recommends vaginal injections with the Higginson syringe, and considers the bidet the useful vessel that it is.

In 1879 I devised a vaginal syringe, made by Tiemann & Co., of New York,² which has since been greatly improved. The bulbs for this syringe were manufactured at first in Paris, making the syringe very expensive, but lately Messrs. Tiemann & Co. have manufactured these bulbs in New York, and it is now possible to obtain the best vaginal and rectal syringe which I know of, not excepting the excellent English Higginson, from them. This syringe is made entirely of rubber, and the vaginal and rectal tubes are perfectly flexible. There is no terminal orifice, but the sides are perforated with velvet eyes for a distance of nearly two inches from the end. These rubber

¹Read before the Newport Medical Society on October 7, 1885.

²Quoted by Thomas, "Diseases of Women," p. 74.

¹A death from the use of a Davidson's syringe is reported in the Gynecological Journal, 1872, p. 340, et seq.

²New York Med. Record, July 5, 1879.

syringe points do not lacerate the mucous membrane nor produce the injury so often caused by the hard metallic tubes. The bulb and tube are large and

afford a copious supply of water. For use in the recumbent position the vaginal douche pan invented by Dr. Baker, or the Reynolds siphon bed-pan manufactured by Otis Clapp & Son, are to be recommended; but the necessity for the use of the bed-pans referred to is only when the patient is too feeble to administer the injections herself.

With the bidet and the syringe which I have already described, a safe and useful vaginal injection can be obtained.¹ The patient can make herself very comfortable on the bidet, and the syringe is so constructed that very little effort is required to empty the bulb, and pour out into the vagina a copious supply of water, estimated as being many times greater than that obtained from any other syringe at present in existence. The dangers of uterine colic and other accidents while using this syringe and the bidet are reduced to the minimum. A thorough washing of the vaginal walls is easily accomplished, and a large bidet allows a much greater supply of water, and is consequently a cleaner apparatus than can be possible from any bed-pan or fountain syringe. It is worth something for the patient to be able to arrange for and to use the bidet without trouble and innumerable preparations. It should be used just before stepping into bed. I direct my patients to fill the bidet as full as possible with water from 100° to 110° F. in temperature, when ready for use. The patient should have the legs covered with warm stockings, the feet encased in warm slippers, and if weak a warm wrapper can be thrown over the shoulders. The injection should be continued for at least ten minutes. The ingredients to be added to the hot water should be carefully mixed with the water before using. After the injection the parts should be well dried with a soft towel, a suppository introduced and a napkin applied immediately upon entering the bed. For the treatment of ordinary leucorrhœa I direct that the hollow vaginal suppositories of Dr. Chas. L. Mitchell, of Philadelphia, and a formula devised by myself, consisting of sulpho-carbolate of zinc, grs. x, and

sulphate of morphia gr. ss., be used, or else the suppositories of boro-glyceride, made for me by Messrs. Theodore Metcalf & Co., of Boston. In the *New York Medical Record*, Sept. 24, 1882; the *American Journ. of Obstetrics*, Feb., 1884; the *Philadelphia Med. Times*, Sept. 20, 1884; and the *Virginia Medical Monthly*, August, 1885, I have called attention to the valuable properties of boro-glyceride, especially in gynecological practice. For those of my readers who are not acquainted with boro-glyceride I would quote the following from the *British Medical Journal*: "Boro-glyceride is a body of definite chemical composition ($C_3H_5BO_3$), which forms a definite hydrate with a large quantity of boiling water, and is not, we are informed, decomposed when diluted in the proportion useful in surgery—one part to twenty or thirty parts of water. Such a solution is inodorous, has a slight saltish taste, and is quite unirritating to a wounded surface. Under its use wounds of all kinds do extremely well, and heal fully as rapidly as under carbolic acid dressings, over which boro-glyceride has the advantage that it does not irritate the wound or the surrounding skin, and that it is, so far as is known, entirely innocuous when applied to a wounded surface." Messrs. Theodore Metcalf & Co., of Boston, have at my suggestion made vaginal and rectal suppositories of boro-glyceride in combination with gelatin and pencils of the same for intra-uterine and other uses. These contain twenty-five per cent. of boro-glyceride. The suppositories are of three sizes, Nos. 1, 2 and 3. No. 1, the smallest, is a useful suppository in various rectal disorders, particularly in hæmorrhoids and pruritus ani. They are also useful in the treatment of thread worms. No. 2 is of medium size, for either vagina or rectum, and No. 3 is indicated where a larger amount of boro-glyceride is required in cases of chronic leucorrhœa, vaginitis, or of uterine diseases in general. The largest suppositories should not be used more than three nights in succession, and experience has taught me that the best results are obtained by using them every other night. Boro-glyceride is an excellent application for a lacerated cervix, spread thickly on the diseased surface. It can also be spread on absorbent cotton, and introduced and applied in that manner. The cleanliness and gentleness of this remedy, and the steady improvement resulting from the use of boro-glyceride, will be very satisfactory to both patient and physician.

Dr. Storer considers that four general indications exist for vaginal injections: 1. As a lavement for cleansing purposes. 2. For the purpose of producing a deep-seated effect for relieving chronic congestions. 3. Where an exosmotic effect is desired, as in the use of saline and other solutions. 4. Where a local effect is desired, corresponding with gargling for the throat, etc. In the latter class of cases the recumbent position might be more advisable. He thinks that vaginal injections are unquestionably too often prescribed, and that physicians are reckless in directing ingredients for vaginal injections that are of the most unsuitable kind, and often productive of lasting injury. Sometimes even dangerous ingredients are used, creating instead of alleviating dis-

¹The bidet is a triangular stool about sixteen inches high, containing a porcelain basin which can be easily lifted out and cleaned. The stool is peddle-shaped, the broad end for the support of the buttocks, and narrow anteriorly. It can be obtained at many of the house furnishing goods stores. Incidentally it may be well to mention the fact that the bidet is useful for the treatment of rectal diseases of both sexes. For bathing hemorrhoids or prolapsed ani it is certainly preferable to the pans so generally recommended. A modest prejudice exists against the bidet, many ladies disliking to use one, since it is so well known that French women use them to prevent conception.

case. Such injections are sometimes followed by a more serious disease than they were at first intended to relieve. The same discretion should be used in prescribing vaginal injections that one employs in treating the mucous membrane of the eye or fauces. Every gynecologist must have witnessed the deplorable effects resulting in almost ruined vaginal walls from too severe injections of such substances as alum, tannic acid, etc. With the most ordinary skill on the part of the medical attendant, the syringe which we recommend ought to be a safe one. It is well, however, to remember that serious injury has resulted from neglect to empty the air from the tube before inserting into the vagina. Care should be taken that no air enter the bulb or tube while filling the syringe. By using a bidet this accident is more readily avoided if plenty of water be used, but with an ordinary hand-basin it is of frequent occurrence.

Many syringes are so constructed that a pint or more of water answers for the entire "sitting," being used over and over again, becoming filthier and filthier each moment. Such machines have little to recommend them. A copious water supply and a copious stream are the most desirable features in a good vaginal injection, and a syringe which cannot accomplish this is simply worthless. Cheap syringes are commonly offered for sale because they are cheap. For a good vaginal syringe a fair price must be paid. In drawing attention to the dangers from careless vaginal injections, it may be well incidentally to note the recklessness with which some medical men recommend intra-uterine injections. This is the more inexcusable, since so many general practitioners practice gynecology to a considerable extent. Intra-uterine injections are seldom justifiable, and then only when they can be employed by a safe instrument acting more or less on the principle of the double canula. For the vaginal injection with the syringe we recommend, the best possible ingredients are boro-glyceride in solution, borax, and even common salt in suitable proportions. Much of the benefit derived by women from sea-bathing, aside from the general constitutional tonic effect of sea-side air, and salt-water baths, is the fact that the sea water does actually enter the vagina during the usual exercise of bathing, and exerts thereby a cleansing, healing effect upon the vaginal walls. While the possibility of such entrance of salt water has been denied by some, on the ground that the walls are too closely approximated to admit any water, the fact remains the same that water actually does enter, and that inquiries made have proved this beyond question, not only in the case of multiparæ, but of others, and even virgins. The closure of the vaginal walls is not like that of the closure of sphincter ani. Besides these preparations there are others which can be used in greater or less strength, according to indications. The large tube will be found often too large for unmarried women, and for such cases the rectal tube can be used, but generally speaking the larger vaginal tube is suitable where injections are found to be necessary. The use of the syringe cannot alone cure diseased vaginal walls, and the atomizer and other appliances must play their part, not to speak of

the surgery necessary for the uterus and the special treatment needed in all uterine cases. In vaginal injections properly administered we have an invaluable aid in the treatment of many of the diseases of women, and a guard against the attacks of diseases to which woman is so liable.

In conclusion, the physician should be careful to advise against the prolonged use of vaginal injections during pregnancy, and also to caution patients against using injections of any kind during the menstrual period. To many these warnings may seem superfluous, but the physician of any experience must have seen much harm resulting from ignorance of these very simple laws, in medical attendants.

Newport, October 7, 1885.

SIMPLICITY AND ADAPTABILITY IN THE TREATMENT OF FRACTURES.

BY GEO. N. MONETTE, M.D.,

OF NEW ORLEANS, LA.

In a former issue of *THE JOURNAL* Dr. John B. Roberts, of Philadelphia, made an especial mention and advocacy of simplicity, as also strict anatomical appreciation of surgical appliances, in the treatment of fractures. Text-books, too often, bias the practitioner in his isolated field of labor, and he is often denied treatment of cases, owing to his not being supplied with orthodox paraphernalia requisite for certain cases. Let each one, so called upon for surgical advice, only exercise his inherent ingenuity, and then make such an appliance as common sense and the anatomico-surgical indication would point to.

The preservation of the integrity of the limb, both as appertaining to bony and muscular and integumentary tissues, must of necessity engage the attention of the attendant. Having a compound fracture, the appliance must be adapted with especial reference to immobility for the bone, as a comfortable exit at the seat of the laceration for all suppurative discharges, guarding cautiously against too great compression of the sympathetically inflamed tissue. This must not be actuated by any routine, as laid down in the books. I have been able to treat and control successfully all of my cases of fracture upon the impulsive plan, not by fixed laws relative to authorities, but as the case and common sense would indicate, save that, with Liston's long lateral splint for fracture of femur. The use of Liston's straight lateral splint for fractures of the femur, is confined by the indications for its use. In my experience, I have had one case of fracture of the femur which resulted with overlapping extremities; not through any fault of the splint, nor inaptitude on my part, but through a meddlesome daughter, who slackened the perineal strap after my morning (*daily*) visit, when I had at each visit drawn the strap taut. Her interference caused some irregularity; I had no recourse, hence my case was not a success.

In compound comminuted fractures the utmost care in the application of dressings must be exercised; and as to routine bandaging, the same must be rigidly dispensed with. I have treated such cases