don and put it on one side or the other. Sometimes you must work away up on one side, sometimes more in the center, then again on the other side. I have not used the silkworm gut or silver wire suture for ten years. I would consider myself a fossil if I did such a thing, as a rule.

DR. REED, in closing—I thoroughly appreciate the researches made by Dr. Harris regarding the anatomy of the pelvic floor and the pathology of injuries, etc., since I have had great pleasure in giving prominence to him and to his excellent work in a text-book that I had the honor to issue during last year. It does not follow, however, that the last fact has been discovered regarding these structures, or that the final conclusions have been drawn from the facts already known. Thus, I have personally made a series of dissections of the vaginal perineum and have found muscular structure pronouncedly developed in the area that I have indicated, namely, the perineal nidus at the level of the levator ani. Therefore, when it is stated here that the levator ani muscle exercises no function in that relation the gentleman who makes the declaration simply indulges in a theoretical statement that is advanced for no other obvious reason than to bolster up a preconceived error. It is certainly true that following injury to the muscle its decussation fibers can not be restored to their original lineal arrangement, and I have certainly not contended that they can. While this is true, I do contend, however, that by transplanting the levator ani muscle from its acquired abnormal position on either side to its relatively normal position in the recto-vaginal interval, it is easily practicable to accomplish three very important things: The first is to restore the structural integrity of the perineum proper; the second is, in effect, to shorten the muscles that are elongated or relaxed, only by suture of their mesial separator, and third, to restore back the functional power of the pelvic floor. The permanency of this operation—of this transplantation—is secured by the fact that it does involve the transplantation of the muscle. These are retained *in situ* for a considerable time by non-absorbable but removable suture material, and they are thereafter kept there by the surrounding cellular tissue that is deposited in the process of repair. This prompts me to observe in reply to Dr. Marcy's suggestion, that the only trouble I have had with this operation has come from the use of the absorbable sutures. They have invariably proven to be too absorbable notwithstanding the modern methods of preparation. Theoretically, I look upon the buried animal suture as the best and, except in this operation, I rarely if ever employ anything else. In reply to Dr. Noble I wish to call attention to the fact that the restoration of the fascia—when it can be found—is contemplated in the operation as I have described it. I am sorry to say, however, that I am not always able to find it with the facility that he has described. In conclusion, permit me to say that this is the first operation that I have seen not only in my own hands but in the hands of any operator that seemed logically to fulfill every indication of the case, and that is demonstrably permanent in its beneficent results.

CHRONIC INFLAMMATION OF THE UTERINE APPENDAGES; ITS TREATMENT BY MERCURIC CATAPHORESIS.*

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There are two classes of cases that tax the patience of the general practitioner to an extreme limit, and too often result in intervention that is ever afterwards regretted by the patient. I allude to instances of catarrhal inflammation of the Fallopian tubes in young women, usually monolateral, with more or less involvement of the ovary, as one class. The other class consists of chronic invalids who have at some previous time suffered from an acute attack of pelvic peritonitis, and in whom a physical examination reveals a firm agglutination of the peritoneal surfaces of the pelvic organs, together with a muco-purulent discharge from the upper genital tract. The clinical history of both classes of cases shows that they are etiologically identical with an important difference in their present condition, the second class representing the first after an acute attack caused by more or less traumatism, or other agency, has been superadded. The nature of the affection in both cases remains, however, the same, for we have essentially a mere inflammation to combat, and in the chronic stages to which I refer exclusively the major portion of the affection remains centered in the mucous membrane of the tubal tract, the serous surfaces being merely agglutinated.

The question of what shall be done for these semi-invalids is one of much moment. I restrict consideration to the semi-invalids, for in the presence of the indications of a closed abscess cavity in any portion of the pelvis by the occurrence of a slightly elevated temperature, the case is regarded as amenable only, and properly, to one of the several surgical procedures so well known to you.

That vaginal applications of electricity will relieve and secure a practical cure of many of these inflammatory sequels often after hot water and counter irritant swabbings have failed, is well known to the writer and to many other physicians, but the treatment has the disadvantage of tediousness, for the remedy can not be applied in force to the diseased spots, but only indirectly through the vaginal wall. This remedy has, moreover, been neglected in these conditions by those expert in its use by reason of a misinterpretation of a dictum of Apostoli, who advised most properly against all intrauterine applications of electricity in the presence of tubal or ovarian inflammation. An equal contra-indication to all other intra-uterine medication exists, of course.

It will be observed that these statements leave the way clear to vagino-abdominal applications of electricity in all peri-uterine chronic inflammations, provided the purulent or muco-purulent discharges possess a drainage outlet. It is to an improvement in this vagino-abdominal application of the galvanic current that I wish to call attention, in which the electric current is made to carry a microbicide, that, by repeated interstitial diffusions, may reach and sterilize the germs of inflammation within the tube without detriment to the intervening vaginal wall, and that will at the same time assist phagocytosis by tissue stimulation. The agent selected is the electrolytic salts of mercury, manufactured and diffused simultaneously by the current by simply coating a metal positive electrode with quicksilver and pressing the instrument against the vaginal wall nearest the diseased structures. The circuit is, of course, completed by the usual abdominal pad, and the electrode, which may be of brass,* should be large enough to avoid undue irritation of the vaginal mucous membrane.

The profound local effect of these procedures when repeated daily or tri-weekly for six or eight weeks is instanced, not only in a recession of the symptoms and improvement in the physical conditions, but also in a singular effect on the ovarian functions. By the second month the patient will notice a diminution or even suppression of the menstrual flow. This phenomenon

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee: Drs. A. H. Cordier, W. E. B. Davis and Henry P. Newman.

* Experience in more recent cases than those detailed below indicates that a zinc, ball-shaped electrode to hold the mercury is more quickly effective than the brass electrode.

has been so regularly observed in the patients treated as to be significant. Its probable explanation is a deterrent action on ovulation. As the applications proceed, nevertheless, nature asserts herself and normal periods appear as usual, though somewhat scant during the further continuance of the applications.

Concerning the details of these applications I should say that the active electrode is always positive, of course, as it is from this pole only that the electrolyzed mercury is diffused as an oxchlorid, united with the oxygen and chlorin of the tissues. When the mercury is used on a brass surface some of the brass metals are diffused, but very little, indeed, the electrode often emerging from the application quite denuded of the mercury. About sixty milliamperes for five minutes, daily or tri-weekly, may be used with a large olive-shaped electrode without undue vaginal irritation.

CASE 1.—A young married woman* was about to have an operation for the removal of a boggy tumor in the left ovarian region that was the seat of constant pain. A similar tumor had been removed from the other side by abdominal section six years before. Her general condition had not been improved by the previous operation; the patient, in fact, claimed that she had been made worse by it. After six months of somewhat interrupted treatment, the tumor decreased and finally disappeared, coincident with a complete restoration of her general health. The pelvic functions in particular were restored to a healthy condition that the patient never enjoyed before, her early history having been menorrhalgic. During the progress of this case several sudden flows of watery leucorrhea were noted, making it probable that the tumor was at least partly tubal.

CASE 2.—A young lady with constant pain in the left tubal region was first seen June 19, 1901. The pain was stated by her to have followed a curettage and pessary wearing, the former operation having been done by a skilful gynecologist two years before. The affected region was boggy and tender to the touch, and she suffered from a very profuse and purulent leucorrhea.

Under the treatment described, the tenderness and tumefaction slowly lessened, and though the leucorrhea had not entirely ceased at last accounts, it is evident that the possibility of an unsexing operation was entirely banished.

CASE 3.—Miss E., age 35, with a history of leucorrhea and menorrhalgia previous to the removal of the left ovary, two years before I saw her, came under observation September, 1901, saying she had as much menstrual pain, intermenstrual pain, backache and local tenderness in the left ovarian region as before the removal of the ovary. The leucorrhea was especially abundant. She improved steadily under the treatment described and is now in excellent health.

During the progress of both of these cases there were several missed periods, and in the last case one disheartening return of menstrual pain, though she was able to pursue with ease her occupation of dressmaker, including prolonged use of the sewing machine.

CASE 4.—A married woman, 31 years of age, has been a semi-invalid for six years, at which time she had an acute attack of salpingitis and pelvic peritonitis that left the pelvic organs firmly adherent. Tumefaction existed in both ovarian regions. A constant pain was complained of in the left ovarian region, and there was a copious purulent discharge from the uterus.

During the treatment of this case several periods were passed without flow, though the symptomatic improvement pursued the usual course. The final result was a symptomatic cure, examination showing also that the organs were more mobile and tumefaction lessened.

DISCUSSION.

DR. O. S. PHELPS, Battle Creek, Mich.—I would like to ask the Doctor whether, in using a current of sixty-five milliamperes, with the electrode against the vaginal wall, he does not get severe escharotic effects. My experience has been that even with a current of twenty-five milliamperes I very frequently get an unpleasant eschar in the vagina. I would also like to ask him whether he has used the mercurial treatment intra-uterine, and, if so, with what result?

DR. J. WESLEY BOVEE, Washington, D. C.—I am sorry that there is not more pathology given, and less symptomatology by our electro-therapeutists. We hear masses spoken of, but no mention is made as to what they are. In the first case, in which one appendage had been removed and in which an enlargement appeared subsequently on the other side, the operation was probably advised, but we often find large ovaries in which hemorrhage occurs, and in which an operation is thought of. These cases go on for four or six months, fatty degeneration of the vessel wall occurs, and if the ovary is not removed, the patient continues practically in a state of semi-invalidism. If that was the nature of the trouble in the case mentioned by the Doctor, it is easy to see why such a treatment would relieve her temporarily. Suppose it is a dermoid cyst? Will this electric treatment remove it?

DR. MASSEY, in closing—It has been objected that an exact diagnosis was not made in Case 1. Why should this woman submit to an operation in order to determine the nature of that lump? Its true nature had already been revealed by the previous operation on the other side. If it were a dermoid cyst, for instance, electricity would not do her any good; if an inflammatory swelling, it would cause its absorption. The gentleman who did the first operation on the other side also advised that this lump be removed. His assistant measured the tumor while under my treatment unknown to me and was the first to detect diminution in size.

With regard to erosions produced in this treatment, I always notify the patients who receive daily treatment to tell me when soreness appears. Then I substitute some other form of treatment for a few days, after which I go back to the original treatment. A rest of a week usually clears it up entirely. The cause of the erosion is usually too small an electrode. It is yet a question with me if the zinc-mercury electrode is not superior to the brass-mercury electrode in this work, giving quicker results.

* The details of this case were given in the Journal of Advanced Therapeutics, January, 1902.

ORAL HYGIENE.*

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To secure a healthy condition of the human mouth and maintain it in that condition involves much, not only in the variety of methods by which this may be accomplished, but in its beneficent results, not alone to the oral cavity itself, but to the entire organism.

These considerations may be classed under two heads, viz.: methods, and results. Let us first consider "results," that is, to put it in the form of a question, what results are desirable in order to secure the one grand achievement, a healthy mouth, the accomplishment of which underlies the whole practice of dentistry.

As one of the first results, we may seek to obtain clean teeth, and by that we mean teeth that are clean—clean, not alone for the sake of their appearance, but with the object of improving their structure, of preventing decay, of invigorating adjacent tissues, and of securing the beneficial results which will come to other organs and to the entire system.

The idea has prevailed too generally that the mouth-cleansing done by the patient, that is, the cleansing of the exposed surfaces of the teeth, and other accessible portions of the mouth, has no influence over the inaccessible places between the teeth. This the writer believes to be erroneous to a considerable extent, for the

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Stomatology, and approved for publication by the Executive Committee: Drs. G. V. I. Brown, M. H. Fletcher and R. R. Andrews.