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STUDIES IN GYNECOLOGY FROM THE SERVICE OF THE WOMAN'S HOSPITAL OF PHILADELPHIA.*

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MY PAPER does not pretend to be a contribution to the most interesting and valuable subject of surgical gynecology, but rather a plea for what may be termed preventive gynecology, to which perhaps we have given too little heed in the past.

Not that I would in any way decry the brilliant and skillful results attained by surgical gynecology in this day, for it is too true that diseased conditions affecting the pelvic viscera very frequently result in the production of organic lesions which induce chronic invalidism and render the functional activity of the generative organs a menace to the health and even the life of the patient. Too often, however, the operator himself realizes that in the removal of diseased pelvic organs he is but cutting away, as it were, dead twigs and branches from a plant which has a worm at the root. It is not a matter of surprise, therefore, that when the same social conditions must continue which have originally caused disease, a speedy recurrence is found of the manifestations of ill-health. It has not been uncommon in my experience, after having removed pus tubes for a patient, to have her return suffering from an acute attack of gonorrhoeal cystitis, endometritis or vaginitis. To insure against the recurrence of an endometritis, at least, it is always best I believe in such cases to amputate the uterus at the same time that the appendages are removed.

Practically, the performance of these very radical operations upon the pelvic organs unfit a patient for the marital life, and since two thirds of all patients operated on for

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pelvic diseases are women who are or have been married, the decision as to the absolute necessity for any operative procedure is one requiring a very careful judgement.

So largely is the health of a woman affected by her emotions that any cause for unhappiness induced by the changed conditions of her life may seem to make her last state worse than the first. For these reasons it is my ardent hope that we may look in the future to the fuller development of the constructive processes of our art, the making of healthy women.

How rarely do we find in the special hospitals for the treatment of the diseases of woman, any tolerance of the so-called palliative measures for the relief of the pelvic disease! Yet there is a time in the development of many of these when they are not beyond the pale of hope. There is no better vantage ground for a study of a woman's needs than that afforded by such a hospital as that with which I have been connected with for many years, the Woman's Hospital of Philadelphia, with its large obstetric and gynecologic service. Here opportunities for careful study may be obtained, the constitutions and habits of life of patients observed and such investigations made as to cause and effect in the production of disease as can not fail to bring much enlightenment.

In reviewing the records of the Woman's Hospital of Philadelphia, during the time of my incumbency as its physician in charge, from September, 1886 to September, 1896, I found that among nearly forty thousand cases treated in its wards and dispensary over 41 per cent. were inflammatory disorders of the pelvic organs, mainly septic in origin, puerperal or gonorrhoeal; 27 per cent. were displacements with their attendant complications; 14 per cent. were functional disturbances, mainly due to constitutional causes and arrest of development; 7 per cent. were neoplasms and over 10 per cent. lacerations resulting from childbirth.

In making a study of the conditions which might be regarded as causative factors in the production of the graver forms of pelvic diseases I analyzed 236 cases of major operations occurring in my own service. Forty-two being hysterectomies, twenty-one ovariectomies, twelve cases of extra-uterine gestation and the remainder chiefly cases of diseased

appendages, including thirty-three cases of pyosalpinx.

In 40 per cent. of these the morbid condition seemed to be directly traceable to a puerperal origin; in 15 per cent. there was a hereditary predisposition to tuberculosis; in 12 per cent. a specific taint; in about 14 per cent. simple inflammatory conditions appeared to be the result of exposure or trauma; in 5 per cent. there was imperfect development of the pelvic organs; in 5 per cent. also, persistent uterine displacements; in another 5 per cent. anemia appears to have been the most prominent factor, and in 4 per cent. malignant disease. The facts connected with these figures are in themselves suggestive of the measures to be taken which might obviate much of the suffering. Hospital experience constantly goes to prove that the woman of modern times is inferior in physical resistance to the women of primitive times.

This physical deterioration, although in part the result of the process of evolution by which nature decrees that like shall produce like and that the sins of the fathers shall be visited upon the children, is also the result of an unnatural environment and habits of life which threaten, if persisted in, to result in the extermination of the human race.

The especial manifestation of this inferiority in the growing girl consists in a condition of nerve and muscle atony which greatly weakens her powers of resistance. The pelvic maladies resulting from this condition are arrest of development, displacement and inflammatory involvement to which all weakened tissues are liable on slight cause. Necessarily these conditions tend to disorganize the menstrual life of the young girl and sow the seeds of future calamity. A condition of post-menstrual subinvolution is commonly found which is aggravated after each period of menstrual congestion and results in changes of structure in the tissues of the pelvic organs. The indications, therefore, are for a radical and rational treatment of these abnormal tendencies. I do not agree with the teaching that there should be little local treatment given such cases, nor have I found treatment properly carried out to be demoralizing. The relaxation of the vulvar and vaginal tissues induced by a catarrhal condition of the mucous membranes, as a rule, renders local treatment easy and painless. The use of cocain in any case renders it quite manageable.

Local treatment is only a temporary aid to the restoration of normal conditions. The most vigilant and painstaking effort requires to be directed to improving the tonicity of the uterine supports as well as of the muscular system generally, improving the quality of the blood and combating any especial dyscrasia. The usual tendency to inactivity of the bowels, bladder and skin must be overcome. Before beginning any treatment I insist on such arrangement of the clothing as shall entirely remove all pressure from the chest and waist. This can be done perfectly well without rendering the clothing unsightly or unattractive and is absolutely necessary to the attainment of satisfactory results. In an article written some time ago by Dr. Kellogg on "The Relation of Modern dress to the pelvic diseases of Women," he has admirably shown, by a series of experiments, the effect produced by constriction of the waist upon the mobility of the pelvic organs and on the tonicity of the abdominal muscles and uterine supports. The round ligaments he has demonstrated to be the chief agents concerned in the maintenance of the uterus in its proper position, their power being dependent on the muscular fibers which they contain. Any fixation of the pelvic organs tends in time to produce loss of contractile power in these uterine supports, and as a result we have displacement of the organ or the beginning of a series of ills. The clothing should always be worn sufficiently loose to enable the patient to exercise the abdominal muscles. The removing of all waist bands and the adjustment of the skirts in such a way that their weight is borne by the shoulders facilitates this purpose.

As the matter of clothing has received proper attention I teach the patient how to practice abdominal breathing and give her a series of exercises for strengthening and developing the abdominal muscles. The judicious use of the bicycle is a great aid to overcoming loss of nerve and muscle tone. Even when marked uterine displacement exists I do not prohibit this exercise, but only permit it while the uterus is maintained in proper position by means of tampons or a soft rubber pessary, the presence of which even in the case falls would have little or no ill effect.

Should a marked catarrhal endometritis exist, it is sometimes well to precede all other treatment by a curette-

ment of the uterus under proper precautions. Such treatment as the above, carried on for weeks and even months with the growing girl has, in my hands, proved fruitful of most excellent results, and has been of great advantage when persisted in event after this period.

The weight of the patient's trunk being borne by the saddle of the bicycle, she can take much more exercise with less exertion than she could if she attempted to walk. In older women, with relaxed vaginal outlet, I have found that I have gained much by teaching them how to introduce a sponge daily into the vagina in such a way as to lift the uterus into proper position. A soft silk sponge of proper size is selected and made into a tampon having a string fastened to it, by which it may be withdrawn. The patient is instructed to keep this over night in carbolyzed water, after having thoroughly washed it out after its withdrawal, with castile soap. Before its introduction, it is anointed with boroglycerid, and as it needs to be carried up in the pelvis to a point farther than the finger can reach, she is instructed how to use a thick glass rod, such as may be obtained at any drug store, to carry it well into the hollow of the sacrum and behind the cervix uteri. The knee-chest position facilitates its adjustment.

The same sponge is only permitted to be used two weeks, when a new one must be obtained. Patient's unable to wear pessaries because of peri-uterine inflammation or tender ovaries have found this treatment very acceptable. It is only permitted to be carried out under strict medical supervision.

Unhealthy conditions of the pelvic organs brought about previous to marriage ill fit a woman for child-bearing, and as a consequence, we find the following perversion of the normal phenomena associated with child-birth.

1. During pregnancy, a tendency to the early loss of the product of conception, owing to a diseased condition of the endometrium.
2. When this does not exist, a tendency to the prolongation of the period of gestation, the result of the atonic condition of the uterine tissues and of the abdominal walls, which thus more readily submit to overdistension.

During labor we find distocia caused: 1. By physical

exhaustion, the result of neuromuscular atony, which renders uterine contractions inefficient.

By the mechanical hindrances to the progress of labor produced by undue size and ossification of the fetal head, this being undoubtedly attributable in large part to the physical inactivity of women in civilized life during pregnancy.

During the lying-in period we have: 1. The lengthening of the time required for the process of involution, also frequent subinvolution. This condition of puerperal subinvolution, as does that of menstrual subinvolution, predisposes the uterus upon the action of all causes of pelvic congestion, to take on structural change. A second perverted phenomenon of the lying-in is the imperfect performance of the function of lactation. A third is what may be termed a subinvolution of the abdominal muscles. The effect of this relaxation of the abdominal walls upon intra-abdominal pressure and its relation to prolapses and displacements of the pelvic organs is a matter of great importance.

All these conditions may be averted or modified by judicious treatment. Without dwelling unduly on the methods to be followed, I should like to mention the effect of bicycle riding as persisted in by two patients during their pregnancy. The one who had always suffered considerably from delay during labor, had the shortest and easiest delivery she had ever experienced and a more satisfactory convalescence. The other is still riding her wheel during the last month of gestation. Fearing she might injure herself by a fall I tried to dissuade her from doing so, but after a few weeks she begged me to allow her to resume the exercise, saying that it tired her so much less than walking and prevented her from getting melancholy. Both patients live in a suburban place and hence are not subjected to the accidents so common in crowded streets.

When a contraction of the pelvis complicates the condition of things in a patient of weakened muscular power I give especial attention to aiding the first stage of labor. In the maternity wards of the Woman's Hospital I found about 14 per cent. of the patients to have contracted pelvis. Including among abnormal cases those of faulty inclination, the number reached fully 20 per cent. This is perhaps

owing to the large proportion of foreigners delivered in our obstetric wards. The generally contracted pelvis were found to almost double the number of simple flat pelvis. The average contraction was not of a high grade. In the simple flat pelvis the conjugata vera varied between 8 and 10 cm; in the generally contracted between $6\frac{1}{2}$ and 10 cm.

The management, *par excellence*, of moderately contracted pelvis is, to my mind, the induction of premature labor. The advantages of premature delivery to the mother are owing to the diminished head pressure: hence the rare occurrence of lesions of the genital canal. I have rarely found it necessary to induce labor before the thirty-sixth week. The aid of the *couveuse*, or hatching-cradle, is very appreciable in the management of premature infants in our maternity. The fetal mortality from all causes during the period covered by my investigations was 4.3 per cent. On the occurrence of uterine inertia during labor, when it could not be overcome by suitable tonics, artificial delivery was resorted to, the presenting part not being permitted to remain stationary at any one point long enough to endanger the maternal tissues by pressure.

During the lying-in, when the lochia rubra persisted for a longer period than was normal, I made an examination to discover the cause. Was there a tendency to uterine malposition, this was kept corrected. A possible hypertrophied condition of the endometrium treated by gauze packing or gentle curettage, which served also to stimulate uterine contractibility. Hot douches were employed and the patient kept in a reclining position longer than was usual. Difficulties with regard to lactation can largely be met by a judicious management of the patient, especially with reference to diet during pregnancy.

The methods just described have proved most satisfactory in our hands in the management of the obstetric work of the hospital. The maternal mortality was less than 1 per cent. About 19 per cent. of the cases required operative interference at full term. The operations included Caesarean section, the Porro operation, symphysiotomy, forceps deliveries, versions, the management of breech deliveries, craniotomy, embryotomy and the induction of premature labor. I have found in my work that whenever I was able

to reach a woman's understanding, getting her to co-operate with me in the measure intended for her relief, I have had little difficulty in carrying such measures into effect. I therefore believe that it is in the education of women to a proper appreciation of physiologic laws and of the virtue and dignity of true wifehood and motherhood as controlled by these laws, that we will find the most powerful factors in the work of reform which we hope may result in her physical restoration and in the production of a healthier generation of human beings as her offspring. At the close of a lecture given by myself recently on the subject of personal hygiene, to a large class of young ladies in one of our fashionable schools, I had a striking illustration of this. One young lady among several grouped around me said most earnestly: "Doctor if you have been doing everything all wrong before the age of 20 is there any chance for you to be set right afterward?" I would close with a query addressed to the members of this Section of the American Medical Association: Do we as conservers of the health of women so influence the education of the young men and the young women of our day as to teach them how to live for healthy parentage.