to the side through which the chin points. After each traction the forceps have to be unlocked and a controlling hand introduced in order to prevent any damage. In cases where normal rotation has already taken place, the application of the forceps will in no way differ from the application in face presentations. Especial attention has to be paid to the ears of the child, which very easily become entangled in the blades. In summing up the following statement seems to be justifiable: Deflected presentations are very important abnormalities which very easily lead to complications dangerous for mother and child. The diagnosis made promptly will enable us in the overwhelming majority of cases to prevent trouble by appropriate interference. The inactivity which is taught by so many text-books is unjustifiable.

DISCUSSION.

DR. RUDOLPH W. HOLMES, Chicago—The author has covered so much ground that it is impossible to discuss the paper as a whole. The occipital presentation which he says is the usual, normal one is really a rather rare presentation, occurring typically in the generally contracted pelvis. The part of the head which really does present normally, i. e., the most dependent portion, is just anterior to the smaller fontanelle, on the sagittal suture. If the examining finger follows the axis of the pelvis this point is the one found first; if the finger enters back of the pubes the occiput is met with, and suggests that it is the presenting part. Frozen sections demonstrate this. Extension is of grave import when the occiput is posterior, persistently so, or when the sagittal suture runs transversely in the so-called transverse arrest, for the occipito-frontal diameter tends to come into consideration in the mechanism; when the occiput is anterior this extension is of importance as a cause of fetal dystochia, but offers no comparison to the dangers in the positions above mentioned. You must differentiate between the abnormal and normal extension. In flat pelvis as the head enters the brim the sagittal suture is transverse, and in the descent of the head the frontal region dips, extension occurs; this is a physiologic process in a pathologic pelvic deformity, and no attempt should be made to interfere with the mechanism. As the head passes the brim in occiput posterior there is a slight extension; again, it is physiologic and no interference is needed. In these two conditions, occiput posterior and flat pelvis, posture is to be practiced as a routine after the head has passed the brim, but not before. This should be done by putting the woman on that side towards which the occiput is directed: i. e., occiput to the right, on the right side, occiput to the left, on the left side. This will oftentimes save a difficult operative procedure.

Dr. Kolischer pointed out a thing that is known generally in Europe, and is only slightly recorded in American obstetric works, and largely ignored in practice, and that is that the fronto-mental line passes through the pelvis transversely, rotation occurring only when the chin has practically reached the vulva, and the much elongated occiput has passed the promontory. Too often in practice the physician finds this condition obtaining, thinks it pathologic, puts on forceps, and tries to rotate. It is the last thing he wants to do: leave it alone and rotation will take place in due time. Ziegenspeck has not received sufficient credit for the treatment of face presentation. He introduced a method contemporaneously with Thorn, a combination of Schatz's and Baudelocque's methods. Thorn combined Schatz's method with the second procedure of Baudelocque, the internal hand pulls down the occiput. Ziegenspeck used, internally, Baudelocque's first method which is first to push up the face (the chin), and to guide the occiput into the brim. Ziegenspeck's method is better than Thorn's in that less dilatation is necessary. Tersely put, when interference is indicated version usually should be done in mento-anterior positions, for correction to a vertex would produce the relatively bad occiput posterior, which perhaps is the most frequent cause of face presentation. In instances of mento-posterior, manual correction is more justifiable, for when the

vertex is made to present the occiput is anterior, the most favorable position for delivery.

DR. C. S. BACON, Chicago—I will call attention to one point, and that is the question of management of face presentation, the most important point in the whole question. Allowing these face presentations to go on is often the cause of serious danger. I have come to the conclusion that even when the pelvis is large and the head small, or undoubtedly not enlarged, it is better to interfere in every case, and I do not believe Dr. Holmes' manual correction is the proper interference. The interference by combined manipulation can be carried out in almost every case, unless the head is firmly fixed in the pelvis. I think it is rare that, when the patient is anesthetized, the head can not be pushed back and the position rectified. That must always be done under anesthesia; without anesthesia it is neither desirable nor justifiable.

DR. KOLISCHER, in closing—So far as vertex presentation is concerned, Dr. Holmes and I do the same thing. According to Webster, vertex is the top of the head, and occiput the posterior part of the head. In normal presentation the posterior fontanelle is below this point, and you have an occiput presentation. Vertex presentation is when the anterior part of the top of the head presents. Slightly deflected presentation should be diagnosed. They are frequent causes of trouble, and if diagnosed in time the trouble can easily be prevented. In occiput posterior we need not place the patient on one side, as it will not do any good. By placing the mother on a certain side, the part of the fundus rests against this particular part, and it starts contraction. It is not right, as Dr. Holmes says, that extension of the head is normal in posterior occiput. If extension is there, the head is forced to come through a large diameter, and if we have to deal with a flat pelvis, how is the head delivered in occiput posterior? By extremely strong flexion. If we encounter such a deflected presentation, an occipito-posterior rotation, even in a normal diameter, we insist on pulling down the occiput and abnormal rotation with slight extension takes place, followed by spontaneous delivery.

So far as face presentations are concerned, I do not think that anybody ever advocated trying to transform a face presentation into inflected presentation before labor comes on, because you can change the position a hundred times before contraction of the uterus, and it will not remain fixed. After the face is driven into the pelvis, it can be changed, and it is impossible to have a change again into the face presentation. The occiput presentation will remain. It is impossible for the antero-posterior diameter of the head to pass through any human pelvis at the same time. There is no pelvis large enough. A face presentation with chin posterior is absolutely impossible so far as text-books go. They say there are no such presentations. I do not know what to say except simply to refer to that popular saying relative to the inhabitants of Missouri.

Dr. Bacon says he would put the patient under general anesthesia. That would, of course, be considerably easier, but there are cases on record where a face presentation was transformed without anesthesia.

MASSAGE AND EXERCISE IN THE MANAGEMENT OF THE PUERPERIUM.*

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In obstetric practice there are various conditions when a patient should keep in the horizontal position for a longer or shorter period of time. For example, rest in bed is a very important part of the proper management of excessive vomiting of pregnancy. Sometimes it is necessary or very desirable to continue the rest treatment for several weeks. Threatened abortion or premature labor is also an indication for strict observance of a horizontal position. Occasionally this

* 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.

enforced rest must be maintained for months. The same thing is true for cases of heart and kidney diseases.

REST IN THE PUERPERIUM.

While the use of the horizontal position is at times of much value during pregnancy, it is during the puerperium especially that we have to consider its advantages and disadvantages, for here every puerpera is kept in bed for some time, the period depending on a variety of circumstances. It is true that from time to time teachers as well as practitioners appear who discourage any bed-confinement in the puerperium. As is well known the late Professor Goodell was one of these. This practice of getting up on the first or second day after labor has, however, never gained general approval, either among physicians or the laity. There are good reasons for a rest period after labor, the "child bed," as shown by the common custom. Some of these reasons, and perhaps the more important ones, have not been always clearly appreciated, while incorrect ideas on the subject are more or less prevalent. For example, it is often held that getting out of bed during the first two or three days of the puerperium would cause backward displacement of the uterus. A moment's consideration of the anatomic condition shows the absurdity of this idea.

A very obvious reason for puerperal rest is the necessity for recuperation from the exhaustion of pregnancy and labor. In most cases pregnancy is a strain on the prospective mother which makes a period of rest very desirable. The labor itself is also often a serious strain which requires a few days of rest. Any one who has studied the subject of rest cure in other conditions in women and seen its beneficial effect will need no argument to prove its importance here.

SPLANCHNOPTOSIS.

One of the most important reasons in favor of puerperal rest in the horizontal position and one formerly neglected is the fact that the upright position after labor predisposes to splanchnoptosis. The decrease in the intra-abdominal pressure, due to the removal of the uterine contents and the diminished elasticity and power of the lax abdominal walls, is the etiologic factor in producing this prolapse of the abdominal organs. The greater the previous distension of the abdominal walls and the weaker the elastic and muscular elements the greater will be the change in intra-abdominal pressure and the greater will be the possible importance of this factor in causing prolapse.

That pregnancy and the puerperium have an important influence in causing enteroptosis is admitted by all. This influence may be exerted in other ways beside through the changes in abdominal pressure. The elongation and perhaps the relaxation of the supporting ligaments of the organs may be a factor. I do not intend to discuss the etiology of enteroptosis comprehensively, but only to call your attention to the fact that this important morbid condition frequently begins during or immediately after the puerperium, and that improper management of the puerperium is undoubtedly responsible for it.

That so little attention was given to this subject formerly, and that even now it is quite generally neglected, no doubt results from the fact that our knowledge of the etiology and clinical importance of splanchnoptosis is of such recent date. Not until recent improved methods of examination of the stomach were devised could the frequent occurrence and significance of gastroptosis be suspected. Nephroptosis was thought

to be very rare and its bearing on the symptom complex of enteroptosis was unknown. So of the prolapse of the colon and other viscera. Without accepting all of the conclusions of Glenard concerning the varied nervous manifestations of enteroptosis, it may be admitted that many of the nervous, digestive and circulatory disturbances of women with weak abdominal walls and displaced viscera are due to these factors.

So long as a patient retains the horizontal position the chief factor in causing visceral ptosis, gravity, is absent. It follows, therefore, that the horizontal position should be maintained if possible until the abdominal walls have regained their elasticity and strength and the normal intra-abdominal pressure is restored.

The intra-abdominal pressure, dependent as it is on the tension of the abdominal walls, has an important influence on the circulation of the abdominal and pelvic viscera. The involution of the pelvic organs is in turn dependent to a considerable extent on a normal blood and lymph circulation. Whatever helps to prevent a venous and lymph stasis consequently favors the puerperal involution of the pelvic organs. The horizontal position for mechanical reasons is therefore desirable. I think clinical experience will confirm this theoretical conclusion that a reasonable use of the horizontal position favors the involution of the pelvic organs.

DISADVANTAGES OF REST IN BED.

While these and other advantages follow the proper employment of the horizontal position in child-bed, certain objectionable sequelæ often become manifest. These are muscular weakness resulting from inaction, poor circulation with stagnation of lymph, impairment of secretions and excretions, with the general symptoms of weakness, dizziness, constipation and the general malaise of an auto-intoxication. Some or all of these symptoms are found after long confinement in bed in the puerpera, just as they would be found in any healthy individual suddenly transferred from an active life to the bed. These objections are so real that in many cases they counteract the beneficial effects of the bed rest and justify the practice of early rising.

MASSAGE AND EXERCISE.

The problem that I have undertaken to discuss is how we may retain the undeniable advantages of the bed and overcome its objections. I believe this is solved by the systematic and rational employment of massage and exercise.

I do not want to claim that there is anything new or original in the methods I am about to describe. No doubt all of the exercise and manipulations have been common property for years. Probably they have been used by many obstetric practitioners. It is true, however, that these measures are not described in the textbooks, and, so far as I am aware, they are not in general use. They have been gradually introduced into my own practice as their need became apparent to me. Their use has been attended with such satisfactory results that I can not forbear directing the attention of others to them.

Both massage and exercise are therapeutic agents that should be employed with the same degree of care and attention to detail that is observed in the use of drugs or any other remedial measures. Formerly sufficient attention was not given to them in the medical schools, and even now in many schools they are still neglected. The result is that most physicians are personally not familiar with the technic of their administration. Singularly enough most training schools for

nurses also omit from their curriculum training in this very essential part of a nurse's work. Massage manipulations and administration of movements or exercise are therefore left to specially trained persons who, because of their monopoly, sometimes arrogate to themselves unusual powers and invest their simple measures with something of mystery. The worst feature of the case is the fact that measures that should be in constant daily use are overlooked to the detriment of our patients.

Both massage and movement cures are as old as medicine, formerly greatly employed by the Romans, Greeks and Orientals, and more recently rediscovered or reintroduced into general use largely by the Swedes. It would seem superfluous to describe the indications and technic of massage were it not for our common neglect of or imperfect acquaintance with this agent. Because of these considerations I will venture to call attention to the object of massage in the puerperium and to the simple details of technic.

THE VALUE OF MASSAGE.

For our purpose we may consider general and local massage. The latter includes abdominal and breast massage. Massage affects the circulation, both blood and lymph, the muscles, the nerves and locally the abdominal viscera. As to technic we have superficial manipulations or friction rubbing and deep manipulations, general kneading and deep rubbing.

Stimulation of the skin of the whole body by friction, rubbing with the dry hand is a very excellent stimulant to the general circulation and a valuable nervous sedative. It can be performed by any one with sufficient physical strength, and may be employed with advantage several times a day during the whole puerperium.

General massage with deep manipulations, kneading and deep rubbing is a more powerful stimulant to the circulation by mechanically emptying the blood and lymph vessels and exercising an energetic influence on the vascular toicity. The manipulations should be in a direction to favor the venous and lymph circulation. These deep manipulations also keep the muscular elements in good condition by improving the circulation in the muscles and by directly stimulating contractions of the muscular fibers. The improvement of the tone of the muscles of the abdominal wall by its kneading is of much importance. This general deep massage of the extremities, the back and the abdominal walls can be begun with advantage on the first day of the puerperium and continued as long as the patient remains in bed.

Locally massage of the abdominal viscera through the abdominal walls is often of much importance in the puerperium. The strengthening of uterine contractions by such massage directly after labor need not be further considered, as this manipulation is appreciated and practiced by all. Less universal but of great value is massage of the intestines for that common, troublesome and sometimes even dangerous condition, puerperal constipation. Here deep rubbing, beginning with the cecum, passing up the ascending colon, across the transverse and down the descending colon, both stimulates intestinal peristalsis and mechanically moves forward the colonic contents. It sometimes obviates the necessity for enemas and cathartics and is always a valuable adjunct to them.

The essential manipulations of massage thus far considered can be taught an intelligent attendant in one or two séances of twenty minutes or half an hour each. Of course, a completely satisfactory treatment to a sensitive and delicate patient requires much more train-

ing, but I want to call attention to the fact that any physician, even those who have an exclusive country practice, can soon train up assistants who can give him aid in these cases if he himself understands the technic of the manipulation.

TECHNIC OF BREAST MASSAGE.

Massage of the breast is made for the purpose of relieving the painful congestion and over-distension that often occurs at the beginning of lactation. A sharp distinction should be made between this distension and inflammation of the breast. In the latter condition massage is dangerous. As generally practiced, massage of the breast is a painful procedure and based on incorrect principles. The direction generally given to rub the breast from the circumference toward the nipple evidently presupposes the object to be the emptying of the milk out of the breast. It is feared that milk remaining in the breast will "cake" and cause inflammation. There is, of course, no danger from milk in the milk ducts. As a matter of fact the enlargement of the breast is not due to secreted milk, but rather to overdistended blood and lymph vessels. Emptying out these vessels will leave the breast soft and small without removing a drop of milk. The object of breast massage should be to relieve the painful engorgement by emptying the congested vessels. This is done by beginning outside of and above the breast and rubbing in the direction of the venous and lymph flow toward the axillary and subclavian trunks. After the surrounding area is well massaged the breasts are gradually approached, the manipulation being still in the same direction.

No pain should be caused by this manipulation. If the massage is painful it is proof that it is not properly given. The object of massage is to relieve pain. The condition of breast engorgement is not dangerous and will disappear without harm if nothing is done. Such distension is, however, in some cases very painful, and here proper massage furnishes great relief.

EXERCISE AND ITS USES.

When we come to consider the employment of exercise in the puerperium we have to deal with a subject of more general interest and which can be of more universal application than massage. Massage presupposes a nurse or attendant. Even when we have a good nurse she may be kept busy with the baby. Often there is no nurse in constant attendance. In all these cases the mother may do the bed exercises and derive from them just as much advantage as if she had the individual care of an attendant.

A comprehensive treatment of the subject would include the consideration of passive movements that require, of course, the aid of a nurse. These passive movements are, however, hardly necessary in the puerperium, and I pass on to the discussion of the more practical subject of active movements.

We may repeat that the objects of exercise are to strengthen the muscles, and in particular the muscles of the abdominal wall, to improve the circulation and prevent the impairment of the secretions and the excretions, and thus avoid the auto-intoxication that is apt to result. How muscular action favors the venous and lymph circulation needs no discussion. How the secretions are dependent on the circulation and how the general condition of the body depends on the normal activity of its secretions and activities is also too evident to require elucidation. The value of exercise in stimulating a free production of normal milk is un-

doubtedly considerable, as has been demonstrated by experience.

PROPER EXERCISE IS HARMLESS.

Are there any objections to bed exercise? When the kind and amount of exercise is regulated to the condition of the patient I am certain that this question may be answered in the negative. The point that has chiefly interested me and to which I have given most attention is the effect of exercise on the uterine discharge. I have never seen any evidence that exercise of the extremities influences the discharge at all. Once or twice I have thought that the early use of the abdominal and pelvic muscles increased the lochia at first, but it soon stopped, even when the exercise was continued. Such experiences are very common with patients when they begin to get out of bed. Lately I have not begun the abdominal exercises till the end of the first week, and am convinced that no harm will result if the exercises are made in accordance with the rules about to be given.

It is here in place to consider the question whether it is necessary to keep a patient absolutely quiet after labor, and if so, for how long a time. Hirst, in his textbook, says: "The patient shall lie flat on her back and shall not be allowed another posture for at least a week." Robb, in *Jewett's System of Obstetrics*, says: "For the first two or three days the woman should be kept flat on her back with the head only a little raised on a small pillow." The reason for these directions is the fear of cerebral anemia and syncope from the sudden decrease in the intra-abdominal pressure. I do not believe there is sufficient justification for such extreme rules. The decrease in the intra-abdominal pressure may be overcome by the use of a properly applied abdominal bandage. If the uterus is well contracted so that there is no danger from postpartum hemorrhage, and if the patient is in a normal condition, I see no reason why she should remain immovable on her back. I am in the habit of allowing patients who are in a normal condition after labor to move about in bed as much as they please, and have never seen any bad results from such a course.

If a labor has been long and hard a patient should have a few hours' rest. The muscular soreness due to the exertions of labor can be removed by massage. In such cases the exercise generally begins on the third day of the puerperium. Where the labor has not been exhausting it may commence on the second day.

DETAILS OF THE EXERCISES.

The exercises may be classified as, first, those made without resistance, and, second, those made against resistance. I make use of six movements which seem to me sufficient for a pretty general exercise of the most important muscle groups.

1. Combined flexion and extension of the forearm and hands. The patient lies on her back with nothing under her head. The arms lie on the bed extended at right angles to the body, the hands and fingers being also extended as much as possible. From this position of extreme extension the forearms are flexed upon the arms, the arms themselves remaining stationary, the wrists are flexed and the fingers flexed, firmly closing the fists which rest upon the arms or shoulders. Then the arms, wrists and fingers are extended to the first position. These movements are repeated at the rate of fifteen to twenty a minute. Before beginning a deep inspiration is made. Expiration occurs with flexion and inspiration with extension. The movements are made slowly, energetically and both flexion and extension

are as extreme as possible. The movements at the beginning of the treatment are repeated five to ten times.

2. The second movement is a swinging of the whole arm, calling into play the muscles of the chest. It begins with the arms extended at right angles to the chest, as in No. 1. From this initial position the arms are swung to the vertical position and then back to the horizontal. Expiration naturally accompanies the movement upward, which compresses the chest and inspiration the downward movement, which expands it. This exercise is also repeated five to ten times.

3. Extension and flexion of the feet. This exercise calls into play the muscles of the feet and legs. It is a powerful stimulant to the circulation in the feet and is the best way to warm cold feet. The bedclothes are removed from the feet. The patient lies on her back as before, the knees straight. The exercise begins with the feet extended on the legs and the toes flexed. From this initial position the feet are flexed and the toes extended as much as possible. Expiration accompanies flexion of the feet and inspiration their extension. The rate and number of these movements is the same as in Nos. 1 and 2.

Beginning the second or third day these three exercises are all that are used during the first week. As every one who has had any experience with therapeutic gymnastics knows, it is very important that all movements should be made with vigor and thoroughness and that they should be repeated with regularity. My usual direction is that the exercises should be taken in the order of one, two and three, each movement being made ten times. Then, after a moment's rest, they are repeated, and so a third time. This consumes about ten minutes. The exercises are repeated four or five times a day, generally about 10 and 12 a. m. and 4, 6 and 9 p. m. If the patient is pretty weak the exercises are made but twice or the movements are made less than ten times. After two or three days the movements are often increased to fifteen or twenty.

4. The fourth exercise is not begun until the beginning of the second week, when it is added to the other exercises. It is a combined flexion and extension of the thigh, leg and foot. It begins with the initial position of No. 3, that is, straight knee, extended foot and flexed toes. From this position the thigh is flexed on the body, the leg on the thigh, the foot on the leg and the toes extended. Then the leg is forcibly extended to the first position. As in the other cases, expiration accompanies flexion and inspiration extension.

5. The fifth is a flexion of the extended lower extremities upon the abdomen. It is added to the other exercises on the ninth or tenth day of the puerperium. From the initial position of No. 3 the legs and thighs, held stiff, are brought to the vertical position and then carried back to the horizontal. Not more than five movements are made at the beginning.

6. Exercise No. 6 is a flexion of the whole body upon the thighs; that is, a raising of the body from a horizontal to a vertical position by the contraction of the muscles of the abdominal wall. The lower extremities must remain on the bed and the body must be raised solely by the muscles and not by the use of the arms. Both movements of sitting and lying must be done very slowly. The movement should be repeated only four or five times, and that number of movements is all that should be made at one time.

Many patients are unable to do this exercise at first. It should not be attempted before the twelfth or four-

teenth day. It is of the utmost value in strengthening the weakened abdominal walls, and in these cases has given me great satisfaction. I am in the habit of continuing its use long after the patient has left the bed.

These exercises, systematically carried out, with variations suited to the case, add an interest to the management of the puerperium that must be experienced to be appreciated. At first the patient is pleasantly occupied with the novelty of the performances, which fill up the day and banish all idea of monotony. In a few days she begins to feel the strengthening effect of the exercises and rejoices in the consciousness of a strength that is in great contrast with the weakness and lassitude that she may have experienced in a previous child-bed. Finally, when she gets out of bed, instead of dizziness and fainting, she is as strong as when she was a girl.

RESISTED MOVEMENTS.

The efficiency of the exercises described may be increased by making use of the principle of resisted movements. A consideration of manual resistance may be omitted, since such movements require the services of a nurse and the object of this paper being eminently practical makes it desirable to leave the patient as independent of the nurse as possible. Hence I will speak only of resistance by means of apparatus and confine myself to the cheap and well-known Whitely exerciser. I know that theoretically the production of resistance by elastic cords is incorrect, but for our purposes the simplicity and cheapness of this apparatus outweighs its objections.

For the arm exercise the apparatus is attached with the single pulley at the foot of the bed and the handles at the head. The manner of applying the apparatus to exercises Nos. 1 and 2, or modifications of them, will easily be understood by any physician or patient with a little study. For the exercise of the feet and legs the single pulley is fastened to the head of the bed and stirrups or straps for the feet are substituted for the handles.

Important use of resisted movements can be made in special cases. I have employed them only about a year and look forward to a considerable development in this line. For the average case, however, the unresisted movements are perfectly satisfactory and, being more easily employed, are to be recommended for general adoption.

WHEN MAY THE PATIENT WALK?

In conclusion it may be well to briefly consider the subject of "getting up," since it is so closely connected with the subject of puerperal exercise. Ordinarily, as you know, a puerpera is kept in bed one, two, three or four weeks, according to the ideas of the physician and the circumstances of the case, and then she begins to get out of bed by sitting an hour or two at a time. Only after several days is she allowed to walk.

I can see no good reason why a patient should not walk as soon as she sits if the puerperium has been managed in accordance with the principles stated above. Such a patient will not be dizzy when she stands up. It is assumed that any remaining deficiency in normal intra-abdominal pressure is supplied by a good abdominal bandage. For such a patient walking is a good exercise that supplements the bed exercise. For a few minutes at least the abdominal walls, assisted by the bandage, preserve their tension and prevent the tendency to visceral prolapse. On the contrary, the sitting position retained as it generally is for a much longer time

favors splanchnoptosis and splanchnic congestion. As an exercise it has no value.

Hence I am in the habit of telling a patient that she may get up and walk two, three or four minutes four or five times a day, but not to sit down. Sitting comes later than walking. Of course, sitting for two or three minutes is not objectionable, but it is almost impossible to make a patient observe this limit while she will follow the rule about walking. I have patients walking several days before they sit.

As a rule a patient begins to walk on the tenth to twelfth day. By the end of the second week she is allowed to sit ten or fifteen minutes at a time. By the twentieth day she may sit up an hour or two at a time, always lying down to nurse the baby. In bad cases of lax abdominal walls the patient would better remain in bed employing the exercises for three weeks. Of course, there are many cases when the patient is obliged to get up during the second week. For these cases the massage and exercise treatment is of especial value.

DISCUSSION.

DR. A. ERNEST GALLANT, New York City—I wish to congratulate Dr. Bacon for this very valuable paper, but I must differ with him as to the necessity of keeping the patient in bed. My idea has been that we use massage to get the patient out of bed at an earlier day. If we put a well patient in bed and keep her there for three or more days, the muscular tone will disappear, and the woman will be very weak when she attempts to walk. Massage will do all Dr. Bacon claims for it. The muscular soreness complained of during the first twenty-four hours after labor can be eliminated by massage over the back and abdomen, and it can not injure the patient. A light massage is kept up for two or three days, and later passive and active motions are put into effect. I find that involution is more rapid, and when the patient gets up she does not have to overcome that distressing weakness which is so commonly manifested after maintaining the dorsal position for any length of time. Instead of a weak pulse, you have a strong pulse, and there is no tendency to syncope when the patient is placed in the sitting posture, or when she attempts to walk. I do not allow my patients to remain in the dorsal position. The more we keep our patients lying upon the side or abdomen for a certain length of time every day, the better position will the uterus be in after she gets up. The dorsal position, to my mind, is the cause of more retroversions than anything else, and that is where obstetricians make a serious mistake. I make it a practice in every case where before pregnancy there has been any tendency to displacement, to tampon for at least two weeks after the uterus has involuted enough to enter the pelvis. Just as soon as I can feel the fundus on a level with the brim, I begin to tamponade every day with sterile gauze. In this way I train the uterus to resume its normal position with the fundus on the bladder, and keep it there. No matter what position the woman assumes, the uterus can not fall back and the ligaments can not involute in a wrong direction. If we accept the view that the ligaments are guy ropes which hold the uterus in position, then we should train these ligaments to involute in the right direction. When involution is complete a well-fitting Albert Smith pessary can with advantage be worn for 3 or 4 months. Long practice has demonstrated that this pessary when inserted wrong end up will fit the vagina more accurately, give greater comfort, and support the organ more securely.

DR. RUDOLPH W. HOLMES, Chicago—I think in no place in medicine is it permissible to be arbitrary. After a normal, healthy pregnancy and labor, it is a mistake to keep the woman in bed for two or three weeks. Just go to bed for some slight illness and see how debilitating it is. One woman can get up on the sixth or eighth day, whereas in another it would be a crime to let her up before eight weeks. I have three tests on which I rely in letting a woman get up, aside from her general condition. One is tenseness of the abdominal wall. After a normal labor the woman is ready to get up after

eight or ten days. The second is the condition of the perineum. A woman with a severe laceration should stay in bed longer than a woman having none. If the pelvic floor is normal, the retrogressive changes go on, normally, and she can get up in eight or ten days. The principal thing is involution of the uterus, and with that the character of the discharge, absence of pain or tenderness. She can get up when the uterus is no longer palpable. I think it is extremely inadvisable to keep a woman on her back. As soon as she has passed out of the effects of the labor, she should be allowed to assume any position.

I do not believe massage of the breasts should be done unless indicated. I thoroughly agree with Dr. Bacon that massage is very essential for the woman while she is in bed. If the woman has systematic massage, she can walk better when she gets up than the woman who has had no massage. I think it is well to let the woman get up in a chair; as she recovers her strength, allow her to walk.

DR. PHILANDER A. HARRIS, Paterson, N. J.—While considering the question of massage, as advised by Dr. Bacon for a woman who has simply given birth to a child, and who has, therefore, only passed through a perfectly normal physiologic process, we must remember that he is putting upon the attendants of the patient a burden which we are accustomed to do without, and for which I confess I have only rarely witnessed the need of. It appears to me that it too often happens that women who have passed through normal labor are restrained and influenced far too much by us in one way or another.

I believe that the woman who, after passing through normal labor, is allowed to do just about as she wishes, uninfluenced by her nurse or her physician, will make a more rapid recovery and will be better off in the end than if we subject her to all these things.

I thoroughly endorse the remarks of Dr. Holmes, and am with him in the stand he takes in allowing the woman to choose the position in bed she wishes to occupy. Let her assume any position, and let her get up to urinate and to defecate if she wishes to. Do not let her think that she must lie on her back when to lie upon either side, for a change, would be far better. I think the natural inclination of a woman under these conditions should guide us very materially in all our advice to her. I am decidedly opposed to any plan which keeps a physiologic case on its back for many days.

Massage is undoubtedly useful in maintaining or increasing the strength of the patient, and if one happens to have a rich patient, and he desires to prolong the stay in bed, and at the same time avoid the muscular atrophy and consequent weakness ordinarily resulting therefrom, I am sure that the suggestions of Dr. Bacon for the employment of massage will be a capital thing.

DR. GUSTAV KOLISCHER, Chicago—It is a good plan not to keep the patient on her back because it is enervating. I can hardly see how retroflexion or retroversion would be caused by keeping a woman on her back. The uterus *in toto* might go nearer the sacrum, but I can not see how it can be retroverted or retroflected. If we examine a patient who has been in bed for months or years for some other disease, we do not find retroversion or retroflexion. It is absolutely not the fact, and you can demonstrate it by experiment. In a case of antelexion you can put the woman on her back, and it will not change the position of the uterus.

Massage is a good thing. I have not practiced it, but I am convinced that it must do much good. It will prevent many things, but especially constipation. Massage of the breasts should not be used unless there is engorgement or where involution does not progress satisfactorily. We know that nursing an infant is a great stimulant to involution, and in these cases of delayed involution massage of the breasts would be a very good thing.

DR. C. S. BACON, in closing—I am glad to have had the substantial support of all the speakers. The subject is an important one, and many of the ideas are in opposition to the teaching in ordinary text-books. With regard to the point made by Dr. Gallant, early rising after laparotomy and after labor are different questions. It can be allowed after lapar-

tomy, but not after labor, where there is a change in the abdominal contents and consequently in the intra-abdominal pressure. One of the reasons why it is desirable to have the patients stay in bed is that there is a danger of prolapse of the viscera. With the abdominal wall frequently very flabby, the upright position probably does favor the tendency to enteropitosis, and as our Chairman pointed out yesterday, it is one of the things that has a bearing on female disease. If a woman is allowed to go around without much control, she is around more than she should be, and I believe it is harmful to let her do as she pleases. It is going too far. Certain restrictions and limitations must be laid down. All the advantages of early rising can be obtained by the use of the exercises I have mentioned. I am positive of that. Besides, you leave the patient in better condition than she would be if no massage were used. She will rest better.

I do not see how the position on the back can cause a displacement of the uterus. There is also some doubt in my mind about the effectiveness of tamponade. The proper involution of the ligaments, as well as the reestablishment of intra-abdominal pressure, is an extremely important thing in preventing displacement.

Breast massage should be used only in a few cases; when the breast is extremely tender it is very beneficial. However, as usually practiced, it causes intolerable pain, whereas the massage such as I describe gives great relief to the patient. As to the influence of massage in cases of non-lactation, with the view of affecting the uterus, I should imagine that it might be useful, but I can not speak from experience.

A CONTRIBUTION TO URETERAL SURGERY WITH FOUR CASES, INCLUDING A NEW OPERATION FOR DOUBLE URE- TERO-VAGINAL FISTULA.*

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Injuries to the ureters are unquestionably among the most serious and distressing complications which the surgeon can encounter in the course of his pelvic and abdominal work. Whether it be in the course of an operation for malignant disease, in which the ureter has become involved in the neoplasm, or the result of an accident, such an injury always proves a great trial to the nerve and skill of the operator. Accidents of this character will, no doubt, occur in the life of every busy abdominal and pelvic surgeon, no matter how careful and experienced he may be, and it is therefore his duty to prepare himself to deal with them promptly and skilfully. The technic of ureteral surgery fortunately has been perfected to such a degree that it is no longer necessary to follow an injury of the ureter by such a formidable operation as the removal of the kidney; it will nearly always be possible to repair the damage either by a ureteral anastomosis or an implantation into the bladder without sacrificing such an important organ.

In my own experience of about 1,500 celiotomies the ureters were severed four times, always in the course of an abdominal section; twice because the ureters were imbedded in the malignant tumor removed and twice they were divided by accident; in one of these both ureters were injured, one was cut and the other occluded by a ligature, subsequently forming a double uretero-vaginal fistula.

NARRATION OF CASES.

CASE 1.—Mrs. O. H., 64 years old, referred to me by Dr. Pool, operated on at Mercy Hospital June 29, 1898. The tumor

* 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.