tory condition between the last part of the ileum and the bladder.

After consulting some of the records of patients with artificial ani, scattered through surgical literature, usually incidental to more serious abdominal operations than simple colotomy, it is surprising to find how little is the inconvenience they complain of.

As this condition is mostly found in malignant disease of the lower bowel, and usually in the later decades of life, the period of carrying for the new-made intestinal exit is generally limited to the space of a few years before death. But I am now especially referring to non-malignant cases, like the one here reported, where the person, supposed to be thus handicapped, has lived for many years a normal and useful life. I have found no previous record where one has lived for 20 years. Many were found where the condition had lasted between five and ten years.

The successful management of artificial anus in the individual cases depends, to a great extent, on an intelligent selection of a diet, tending to keep the contents of the intestine best adapted to the new exit, so that it shall neither be too fluid nor too solid; also, it depends on habits of watchful cleanliness.

With the above considerations in mind, not forgetting that it takes more than a few instances to prove any truth, in cases of diverticulitis of the sigmoid resulting in ulceration and perforation into the bladder, whether malignant or not, and especially in patients beyond middle life, it is not unreasonable to conclude that the comparatively simple and almost riskless, and also old-established operation of lumbar colotomy, with permanent formation of an artificial anus, would be, in many cases, for the patient, better than resection of the parts, with its serious risk to life; or than the lesser operation of severing the parts and suturing the remaining openings into the bladder and the intestine, remembering that, at best, there is uncertainty of this operation giving permanent relief, and it may result in death of the patient, as reports of some recent cases have proved.

The thirty-first annual session of the New York and New England Association of Railway Surgeons will be held at the Hotel McAlpin, New York City, on Saturday, October 29, 1921. Dr. Charles Mayo will deliver "The Surgery of the Stomach and Duodenum," by leading authors. DR. J. FRANK BLACK, *President*, White Plains, N. Y. DR. GEORGE CHAFFEE, *Cor. Secy.*, Binghamton, N. Y.

PROLAPSE OF THE UTERUS DURING PREGNANCY.

BY G. M. GARLAND, M.D., BOSTON,

Formerly Physician to the Woman's Room in the Out-Patient Department of the Massachusetts General Hospital.

IN a recent paper, I discussed the sufferings that are associated with ordinary prolapse of the uterus. With the advent of pregnancy, there begins an increase in the volume of circulation through the uterus. The growth of a foetus and its attendant membranes necessarily add to the weight of the womb. It would seem a natural inference that under such increase of weight the uterus should acquire a greater liability to prolapse, and that such prolapse should be accompanied by a group of sufferings analogous to those described in our preceding article. That such are the facts of the cases, is the thesis of this paper.

Many years ago, acting upon the suggestion of this thought, I began to treat all my cases which presented symptoms of distress during the early months of pregnancy by the same method which I employed in ordinary cases of prolapse not complicated by pregnancy. It is a familiar fact that the sufferings which are included in the group of so-called pregnancy symptoms are usually confined to the first four months of pregnancy. Subsequent to that date, the ballooning of the fundus of the uterus by its growth raises it above the support of the rim of the pelvis and prolapse becomes less possible, except by extreme violence. It is also a familiar fact that, subsequent to this date, the group of symptoms especially referred to, ordinarily ceases to be prominent. A few cases will serve to illustrate my meaning. They are quoted from an article in the *Transactions of the Association of American Physicians* in 1893, entitled, "Vomiting Caused by Malposition of the Womb."

CASE 1. Mrs. H., primipara, twenty-two years of age, about two months along. I was called to see her on Sunday, July 3, 1892. She had been vomiting incessantly since the previous Tuesday. Food and drink were instantly rejected by the stomach. She was excessively emaciated, and there was a large ecchymosis over the crest of the ilium on the right side, which had appeared that day, and without known cause.

The womb was as large and broad as it should be at that stage of pregnancy. The fundus was

quite firmly wedged behind the symphysis; the cervix was soft and flexed in its upper third. The womb was not very tender to pressure. I replaced in the knee-shoulder position with some difficulty, owing to the wedging of the fundus behind the symphysis.

No medicine was given. The patient did not vomit for more than twenty-four hours, and her appetite began to come back. On the afternoon of July 4, she vomited once, and I found the womb again wedged. I replaced it and held it by a tampon. In the early morning of July 5, she vomited once more. I took out the tampon and inserted a soft rubber ring. The patient was so much improved that she craved meat and a general diet; in fact, she ate so heartily, that she brought on a typical sick headache, which lasted a few hours, and was relieved by a purgative. After this, there was no more nausea or vomiting during the remainder of the pregnancy.

CASE 2. Mrs. D., pluripara, about two months along, had suffered three weeks of severe vomiting, was confined to bed, and had tried many drugs, without avail. She had taken a morphine suppository of one-fourth grain strength, with very little effect, on the evening before my visit.

The womb was anteflexed and sinistroverted. It was not impacted, being freely movable. The womb was replaced. During that day, she was given one more morphine suppository by her mother. The vomiting ceased for forty-eight hours, and then returned as bad as ever. The womb was again replaced and held by a pessary. The relief was marked and the patient gradually recovered. The case, however, was complicated by a large amount of albuminuria. In spite of the kidney complication, the simple replacement of the womb did rapidly what many drugs had failed of doing.

CASE 3. Mrs. M., pluripara, about two months along; very nervous woman, suffered from puerperal mania with first child; came to my office complaining of an incessant disposition to sigh. Her conversation was constantly interrupted by a deep, prolonged sighing, which was exhausting her strength.

I found her womb retroverted to the third degree. I replaced it, and supported it by a pessary. The sighing was immediately relieved. After about two weeks, the patient removed the support and the sighing returned. I found the womb again retroverted, as before. I replaced the womb and pessary, and there was no more sighing during the balance of the pregnancy.

These cases might be duplicated many times from my experience since that date, but they will serve to illustrate the fact that elevation of the uterus, with consequent release of the venous circulation, is proper treatment for this type of suffering in early pregnancy.

To emphasize my point that the suffering is mainly due to the mechanical obstruction of the venous circulation and the consequent back-water congestion in the uterus, I wish to describe one more case.

Mrs. G., three months along in her second pregnancy; her first pregnancy had terminated in an abortion and under conditions identical with those presented at the time I saw her. She lay in bed, completely prostrated; she could not raise her head from the pillow without great dizziness and violent vomiting. She was unable to eat or retain anything, and was the picture of misery.

On examination, I found the following condition of the uterus, which I wish especially to emphasize. The os was partially dilated, the cervix was flattened out and obliterated, and was of a soft, pulpy consistency. The situation corresponded to the first stage of parturition. The wall of the womb was like a pulpy mass and presented every evidence of over-saturation with blood, that is, a condition of excessive passive congestion. I placed the woman in the knee-chest position and easily elevated the uterus, without force. At the next visit, twenty-four hours later, I found the following conditions: The cervix had contracted back to its normal size and consistency; the os had resumed its normal size; the uterus had emptied itself of the superfluous blood. The patient was very much relieved as to her vomiting and dizziness, though still very weak and prostrated. A pessary was not inserted, but the uterus was restored to position and watched for some time. This woman made a gradual, satisfactory recovery, and bore a perfect child.

The chief point illustrated by this case is the fact that there was interference with the venous circulation, and that relief followed the release of that circulation by correction of the prolapse through elevation of the uterus. I have seen repeated cases presenting like features and relieved by like method. I do not claim that all possible cases of vomiting during early pregnancy are due to simple mechanical causes. There may be hidden chemical processes of pregnancy which contribute to the discomfort of the patient and the complication of her case; but I do know (1) that a very large group of cases occur where the sufferings in the early pregnancy are due to the prolapse of the uterus and consequent complications in the circulation; and (2) that such vomiting is controlled in a large percentage of cases by elevation of the uterus and restoration of the proper circulation.

I wish to refer, briefly, to the theory of Dr. Graily Hewitt of London. He says:

"It has been shown that impaction of the uterus in an anteflexed state is observed in a considerable number of cases of severe vomiting of pregnancy. The occurrence of impaction under such circumstances requires to be attentively considered, as it is evidently an important factor in the causation of the vomiting."

Later he adds: "When the impaction persists, it causes intense degrees of vomiting. Whatever view may be taken of the cause of the impaction, it appears that it can, in the worst cases, be relieved by mechanical means. The impaction is relieved, and its effects (on the vomiting) removed by artificially elevating the fundus; and this is a procedure which, necessarily, more or less alters the shape of the uterus and lessens the degree of the anteflexion present."

While thus according much blame to the impaction, he nevertheless believes that the flexion of the uterus is the chief factor; and even with impaction, he says, the former difficulty is relieved by elevating the fundus and thus lessening the flexion. I cannot agree with Dr. Hewitt in this explanation, because he states only half the facts. Not only the impaction is relieved when the fundus is raised, but the entire womb is elevated with all its circulatory apparatus, but the flexion still remains.

Dr. Hewitt claims that in pushing up the fundus, one must necessarily straighten out the flexion somewhat; but in my cases I did not use force to push up the fundus—the organ tumbled into place of its own weight, as soon as released from impaction, when the patient took the knee-chest position and the vagina was opened. The anteflexion still remained, and yet the nausea and other discomforts were banished.

Dr. Rufus A. Kingman published an article in *American Medicine*, No. 8, August, 1913, in which he names three groups of causes for pernicious vomiting in pregnancy: first, reflex; second, neurotic; third, toxemic. Then he adds:

"There are other pelvic conditions which may give rise to vomiting, but, without doubt, the most serious source of reflex disturbance is found in increase of irritation of the nerve fibres in the cervix, and especially in the region of the internal os."

He thereby accepts Dr. Graily Hewitt's the-

ory regarding the cause of these troubles, and recommends the use of the knee-chest position and digital elevation of the uterine body as remedies. Dr. Kingman claims that ninety-nine cases out of a hundred can be cured or relieved by this method. It is conclusively evident that Professor Graily Hewitt and Dr. Kingman and myself agree as to the method of treating these cases, and as to the satisfactory results obtained thereby. Therefore, I shall not take up time in arguing regarding mere theory. I leave the question of the mechanism of these troubles to the intelligent observation of my colleagues, who have ample opportunity for examining the innumerable cases which occur in their practice.

Before closing, I wish to mention one other group of incidental sufferings that occur in the later months of pregnancy. From the sixth month to the end of pregnancy, after the uterus has risen well into the abdomen and increased in weight, it is very liable to tip forward and thus compress the neighboring tissues between itself and the pelvic arch. This condition frequently results in severe backache and local neuralgia, and often completely disables a woman from rising from her bed or taking exercise. In cases of this sort, I have always placed the patient in the knee-chest position and changed the points of pressure between the uterus and the pelvis, and have, invariably, obtained complete relief from the neuralgia caused by this compression. I will cite two cases.

I saw a patient, one evening, in Newton. She was confined to her bed by backache and abdominal pain. For days, she had been kept under the influence of morphine. I relieved the pressure by the knee-chest method; the pain entirely disappeared, and the patient was able to resume the activities of her life. She had no more trouble during the balance of pregnancy.

The second case was a primipara who had reached the seventh month without any special discomforts, when she was suddenly disabled by backache and abdominal pain. I wrote her a letter, asking her, when undressed at night, to assume the knee-chest position and to lift the womb from the pelvis toward the chest. She reported that this simple measure relieved her of all pain and restored her to her ordinary activities.

There is no doubt, if women could walk on all fours during pregnancy, the history of human gestation would be robbed of great burdens of woe.