knows, and will attend to his business alone. One accustomed to give ether is not usually the one to select to give chloroform. To ask a patient to take long, deep or rapid inhalations of chloroform vapor is dangerous. The greatest danger from this agent is in the early stage of its administration, when by a too concentrated vapor or its too rapid use, the heart centres may be surprised and overwhelmed. When using chloroform, it is safer to let the patient's head be turned to one side, so as not to let the concentrated vapor—being four times heavier than air—exclude the atmospheric air. Begin with a small quantity, allow a plenty of fresh air and gradually accustom the patient to the vapor. Never give chloroform in a hurry.

The giving of alcohol as a heart stimulant just before giving chloroform is open to serious objections. In the first place, who knows what the stimulant dose is in individual cases? In the next place, alcohol increases the duration and stage of excitement, and makes nausea, etc., more likely to occur. We all agree that those addicted to the free use of liquor are bad subjects for anæsthetics.

The speaker mentioned a recent publication by an eminent New York surgeon, advocating the giving of a very small dose of chloroform in concentrated vapor, on the ground that if alarming symptoms set in, this amount could be speedily pumped out of the lungs by artificial respiration. This is dangerous doctrine to teach. In the only fatal case by chloroform coming under his observation, the heart stopped *suddenly*. The heart did not previously flutter, grow weak nor intermit, but abruptly ceased. It was like the syncope of concussion of the brain; the contractile power of the heart was annihilated. We may remove by artificial respiration in such a case all of the vapor; but we cannot in this way remove the impression made on the nerve centres which stopped that heart's action.

Although frequently taught, we are apt to forget that we should never operate during partial anæsthesia. Many deaths from chloroform are due to not heeding this advice that comes of experience. Fatal syncope may come on from the consciousness that the painful operation is yet to follow; or if intellectual consciousness is just lost, there seems to be left, so to speak, a consciousness in the nerve centres of the heart and lungs, and the impression of pain on them is fatal. Ether is safe when an operation is to be performed under partial unconsciousness. In operations in which blood or other fluids may escape into the windpipe, chloroform is the safer. Dr. McGuire does not think he ever saw the irritability of the larynx or trachea entirely lost in chloroform anæsthesia, but he has seen it in ether anæsthesia. Possibly the cold vapor of the other may in a measure account for this loss of reflex excitability in the throat.

In organic heart diseases, he has never had occasion to regret the choice of chloroform; but ether is preferable in a nervously weak heart, as also in cases of weakness from fatty degeneration, or loss of blood, or great anæmia from other causes, etc. In such cases any anæsthetic is hazardous, but ether is safer.

Of all the elements of danger from chloroform, fear on the part of the patient, he believes to be the most important and the most frequent. The heart becomes nervously weak. If a calm, confident manner on the part of the administrator does not allay this fear, give hypodermically a quarter of a grain of morphia sulphate, with a one-hundredth of a grain of atropia sulphate, and wait fifteen minutes or so for the physiological results before giving the anæsthetic. Emotional excitement greatly increases the chances of paralysis of the nerve centres presiding over the circulation. Morphia obtunds this sensibility and also acts as a cardiac stimulant, and atropia is probably a more powerful stimulant. That emotional excitement is an important element of danger he believes all administrators will admit.

Children take chloroform well and safely. They are not afraid of being killed by it. Nussbaum has seen 40,000 administrations of chloroform in military life without an accident. Dr. McGuire has seen, as Medical Director of Stonewall Jackson's Confederate Army Corps, 28,000 chloroform administrations without causing a death. Neither the age, sex, health, etc., of the soldiers could account for this. The wounded soldiers dread the hazard of chloroform very little. It is also significant that chloroform has been given to hundreds of thousands of women in labor, with but one fatal case, so far as he has learned; and in this instance it is by no means certain that death was due to the anæsthetic. Even when surgical operations have been required in obstetrical cases, no death has followed the use of chloroform. The recumbent position does not explain all this exemption, nor do the pains of labor, for we have pain from the surgeon's knife, etc. The element of success in all such cases, Dr. McGuire believes, to be the want of dread of chloroform.

Dr. McGuire deplores the partisan debates which have occurred on this subject of the choice of anæsthetics. In the last text-book on surgery issued this year, is the following: "In general there is no comparison between these agents; ether is so much safer than chloroform that the latter is fast disappearing in practice. The estimated death-rate after ether is 1 in 20,000; in chloroform, 1 in 3000." Such statements are the outcome of prejudiced brains, and are absolutely unwarranted by any facts or figures known to the profession.

COTTON GRAFTING.

BY M. PERL, M.D.,
OF HOUSTON, TEXAS.

Absorbent cotton is far preferable to sponge for grafting purposes, as it is always ready and at hand, requiring no preparation for its use; while the preparation of the sponge is a tedious process, and it must be kept in air-tight vessels immersed in an antiseptic solution. The following case will illustrate the *modus operandi:*

Eliza Roy, female, 18 years old, was treated by me from October 18 to November 12, 1886, for cerebro-spinal meningitis. She made a good recovery, with the exception of an indolent ulcer three

by five inches and one-half inch deep, the edges callous and turned under, resulting from a severe burn, on the lower part of the right leg, caused by the application of a hot iron to her feet, one night, while in a semi-comatose state, during the acme of the fever. The burned place was not noticed until she complained of it some fifteen days later, when my attention was drawn to it.

From that time on till April 15, I used all possible topical applications, gave tonics and prescribed a generous diet, with wine, but all to no purpose. I then thought of sponge-grafting, but, having none prepared, concluded to try absorbent cotton in its place. The day previous I had applied a thick coating of cantharid. collodion to the ulcer, which caused the surface and edges of the same to be slightly inflamed. This seemed to me the best time to apply the graft. A piece of absorbent cotton, the exact size and thickness of the ulcer, was saturated with a solution of corrosive sublimate 2:1000, the surplus liquid was expressed and the cotton smoothly adapted to the surface of the ulcer and held in its place by strips of adhesive plaster, over which a layer of borated cotton was spread. This was covered with antiseptic gauze and the whole surface was then closed with strips of rubber plaster, making as tight a covering as possible.

April 17.—The discharge being moderate, the bandage was not disturbed.

April 19.—Plaster, gauze and borated cotton were removed, and adhering puss was removed by a spray of corrosive sublimate of above strength; the graft adhered firmly to the surface of the ulcer, leaving only a small space between the edges of the cotton and the ulcer, to which a solution of nitrate of silver, 1:30, was applied, and the bandage adjusted as before.

April 21.—After removing the bandage the cotton graft had a pinkish color, was raised slightly, adhered firmly, and the space between the edges was much smaller. The same dressing was applied.

April 23.—The graft filled the whole space, adhered firmly, and was of a uniform pink color; the edges of the ulcer were flat and extended over a small portion of the graft; same dressing.

From that day on the ulcer decreased in size at each dressing, and two weeks later was healed over entirely.

On examining the pus with a lens, small particles of cotton fibre could be seen in it, showing that the cotton graft not only stimulates granulation, but also acts as a support to it, and, after serving its purpose, is carried away by the pus.

UTERINE FIBROMA; WITH REPORT OF CASE.

Read before the Section on Obstetrics and Gynecology, at the Thirty-Eighth Annual Meeting of the American Medical Association, June, 1887.

BY J. H. VAN EMAN, M.D.,

PROFESSOR OF CLINICAL MEDICINE, IN THE KANSAS CITY MEDICAL COLLEGE.

The subject of fibroid tumors, of the uterus, having been treated of *in extenso* in numerous classical works and monographs, it is not necessary for me, in this paper, to enter either into the etiology, pathology, or diagnosis. In the line of treatment I shall say nothing of that by drugs; only speaking of one plan of treatment, viz., removal of both ovaries for the purpose of arresting the growth of the tumors.

Our management of cases being largly the result of the accumulated experience of physicians past and present, I shall omit all theory, and simply attempt to add my mite to the general sum of our knowledge on the subject. In order to accomplish this purpose, I have the honor to report the following case:

Mrs. M. H., 34 years old; married sixteen years; never pregnant; *has had poor health for twelve years.* For seven years has had almost constant sanguineous discharge from the uterus; during the menstrual periods being very profuse. In the last two years her physician has five times removed by means of the serrated spoon, a mass of fibroid tissue from within the uterus almost as large as a small goose egg; the growth persistently returning within three or four months after its removal.

October 19, 1886. *Examination* —Patient a medium sized woman. General condition fair. Uterus in position in the median line. Length of canal a little more than four inches. Fundus above the superior strait. From the os, a reddish tumor projected fully one inch. Vaginal discharge, bloody and offensive. In the left inguinal region, a slightly mobile mass larger than a hen's egg was readily distinguished through the abdominal wall. After a thorough explanation of the probable and possible results, she consented to a laparotomy, which was made on October 20, at the patient's home, a little two roomed box-house on the open prairie. The tumor on the left side proved to be an ovarian cyst. Uterus very much enlarged, and showed on its surface, at least two sub peritoneal fibroids. Right ovary healthy. Two small par-ovarian cysts on that side. Ovaries and Fallopian tubes removed on both sides; pedicles dropped, and incision closed.

Without going into tedious details, the history, in brief, is, that the highest pulse and temperature occurred at the end of the first 36 hours, viz., pulse 108, temperature 102°, dropping by the end of the second day to 95° and 100°. From this time to the fifth day, when the sutures were removed, the pulse ranged from 85 to 90, and the temperature from 99° to 100°. The convalescence went on with no complication worthy of mention.

The uterine hæmorrhage continued with varying severity, and with increased putridity, until the middle of January, 1887, when after 24 hours of *severe* labor, a large stinking fleshy mass was expelled from the uterus.

The further progress of the case I will give by quoting from a letter received from the patient a few weeks since:

"I have not menstruated for about two months. I was not *very* bad when I menstruated the last time. I weigh more than I ever did in my life. I appreciate good health, and haven't language to express my feelings."