

elsewhere. About the rupture on the inside of the gut the mucous membrane was reddened, and there was some ecchymoses in the mucous and muscular coats, in a transverse direction.

CASE 16. Male, forty years. Run over by heavy cart. Shock, followed by delirium tremens. Lived five days.

*Autopsy*, Dr. Gannett. Lacerated wound over elbow. Fractures of ribs (right, 2, 3, 4, 5, 6 and 7; left, 3, 4, 5 and 6). Lungs: recent fibrinous pleurisy, double pneumonia, effusion into both chests. Liver: three fractures, each about three centimetres long, and extending but a short distance (one millimetre) into liver substance. Abdominal cavity contained about 30 cubic centimetres of blood.

CASE 17. Male, fifty-three years. Delirious, and jumped from third-story window. Lived two days.

*Autopsy*, Dr. Gannett. Fractures: lower jaw, sternum and ribs (right, 3, 4, 5, 6, 7, 8 and 9; left, 4, 5, 6, 7 and 8); "old depressed fracture of skull," with small collection of blood between the dura and the pia over the occipital lobe. Pleura under the fractured ribs intact. Lungs: lower lobe of left atelectatic, and contained non-aërated fluid; lower lobe of right, dark-colored and quite firm from the presence of considerable effused blood. Abdominal cavity contained 50 cubic centimetres of fluid blood. Liver: transverse rent, about eight centimetres long, on right border of right lobe.

CASE 18. Male, forty years. Struck in the right side by a broken casting thrown from a centrifugal machine. Extreme shock. Lived about five hours.

*Autopsy*, Dr. Gannett. Ecchymosis along the lower border of ribs on the right side. Kidneys: rupture of right, with the extravasation of about 500 cubic centimetres of blood into the perinephritic connective tissue. Liver: multiple ruptures of right lobe, with the escape of 1,500 cubic centimetres of blood into the peritoneal cavity. Fractures of ribs (right, 5, 7, 8, 9 and 10).

CASE 19. Male, sixty-three years. Fell twenty feet, striking abdomen and chest on the rail of a vessel. Lived twenty hours.

*Autopsy*, Dr. Gannett. Visceral pleura showed numerous large ecchymoses. Peritoneal cavity contained 200 grammes of "pea-soup-like material." Intestine: rupture of jejunum large enough to admit the little finger; a foot lower down in ileum was a rent half-way across the bowel; still lower, another the size of a lead-pencil. Aorta: transverse rupture five centimetres long, with retro-peritoneal hemorrhage.

CASE 20. Male, sixty years. Caught under elevator. Extreme collapse. Lived eighteen hours. Catheterized three times, and no blood found either in gross or under the microscope.

*Autopsy*, Dr. Gannett. Fractures of ribs (right, 7, 8, 9, 10 and 11; left, 6, 7, 8, 9 and 10). Separation of eighth dorsal vertebra from its cartilage. Peritoneal cavity and retro-peritoneal tissue contained a large amount of blood. Kidneys: right at its anterior and upper extremity was extensively lacerated.

CASE 21. Male, twenty-three years. One week before entrance to the hospital fell from an empty wagon, the rear wheel passing over his loin and back.

On entrance the heart and lungs were normal except for a small area near the base of the left lung where there were a few "dry crackles." This was at the upper end of an area of dulness which extended from the pelvis up to about the seventh rib. Over this area of dulness there was some resistance and tenderness. General condition poor.

About one month after entrance an incision was made in the right lumbar region, and a large amount of fluid and clotted blood with a slight urinous odor was found in the tissues about the kidney, which was torn on its upper and inner surface. The urine before the operation contained a few blood-globules, which are still present at times but not constantly. This patient has gradually improved, but is still in the hospital, fifteen weeks after the injury, and ten after the operation.

CASE 22. Male, thirty-four years. One month before entrance to the hospital was struck in the epigastrium by a piece of wood thrown from a circular saw. During this month he was in bed most of the time on account of more or less persistent vomiting; the first vomitus was said to be bloody, after that it was not.

Upon entrance to the hospital a mass was felt midway between the ensiform cartilage and the umbilicus.

When operated upon, one week after entrance, this was found to be a cyst connected with the pancreas; "oozing from the walls of the cavity prevented any tear or lesion being actually seen."

Improvement was rather slow; and he left the hospital in good condition, but with a sinus still open and discharging a clear fluid.

## Reports of Societies.

### OBSTETRICAL SOCIETY OF BOSTON.

CHARLES W. TOWNSEND, M.D., SECRETARY.

REGULAR Meeting, Tuesday, March 16, 1897, the first Vice-President, DR. FRANCIS B. HARRINGTON, in the chair.

DR. CHARLES M. GREEN read a paper entitled

THE USE OF ETHER IN OBSTETRIC PRACTICE.<sup>1</sup>

DR. A. WORCESTER read a paper entitled

THE SUPERIORITY OF CHLOROFORM AS AN ANESTHETIC IN MIDWIFERY PRACTICE.<sup>2</sup>

DR. E. P. DAVIS, of Philadelphia, read a paper entitled

CHLOROFORM IN OBSTETRICS.<sup>3</sup>

DR. NORTHRUP, of New York: I was deceived as to the subject for discussion. I had not thought it was the question of chloroform or ether in obstetrics, but chloroform for general narcosis or for operations in general; and with that in view I began to communicate with some of my hospital surgical friends to find out, but at a late moment I learned that the field was narrowed to obstetrics. From New York I should say there was no ground for discussion as to which you should use, chloroform or ether. I do not know that I ever heard of anybody using ether except in prolonged surgical operations where the patient was to be put under deep narcosis. When I was a student from '76 to '78 we were taught that the pregnant woman and parturient woman was an entirely safe subject for the administration of chloroform; we were taught it was perfectly safe to administer chloroform to children; and never until this moment has it occurred to me to doubt that, and I have seen a little of the administration of chloroform both to parturient women and to children. It was always emphasized that we should use the Esmarch shield, that we should always use precaution, watching both the respiration and the pulse, but that we should not use it has not entered my mind until to-night. At the Foundling Hospital, where I have spent a good deal of my life, we have a Maternity Hospital, and we have for our interne staff men who have served in the Sloane Maternity, the Seventeenth Street Maternity, etc., so that there have been brought to the house all the different methods represented in these maternity services, and I

<sup>1</sup> See page 198 of the Journal.

<sup>2</sup> See page 196 of the Journal.

<sup>3</sup> See page 193 of the Journal.

have had an opportunity to observe the practice by intelligent men from those places; and in every one of these institutions they use chloroform regularly at all births. Speaking from observation and experience, I think the Sloane Maternity conducts the service in the most exemplary manner of any. The men who come to us trained from the Sloane I think have been our best men. At the Sloane Maternity they have had 6,000 births. At each of those births as a routine they have given chloroform when the head was on the perineum. They claim the best results in saving perineum, and I am convinced from what has been brought to me from men on the staff that they do not claim too much. In 6,000 cases they have probably given chloroform in every case with a few rare exceptions and those exceptions are, as I have stated, where they have been obliged to put the woman to the surgical relaxation, such as for version or prolonged high forceps. The other exceptions in which they give ether are in alcoholics who are brought in in parturition. In all valvular lesions of the heart, in alcoholics I think they make a distinction in favor of ether. The rule is chloroform; the exceptions are rare. They have about 600 births a year, and a man who had been there some time said he had not seen ether used at all; he was one of the assistants. At the Nursery and Child's Hospital a man who had been there thirteen months answered me over the telephone that they have about 170 to 180 births a year, and that practically no ether had been used in the thirteen months he had served there, that chloroform is given regularly in every case while the head is on the perineum. At the service of the New York Infant Asylum they have a birth a day. They have used with rare exceptions chloroform. Practically the same story is true of them all. I think I may say in taking all these institutions together, that they habitually use chloroform while the head is on the perineum, and in only rare exceptions is ether used, its use being limited to cases in which valvular lesions of the heart are present, to alcoholics and in case of prolonged operations.

I might go one step further as regards the use of chloroform in New York. In the Presbyterian Hospital I have the impression that in about one-third of the cases the question arises which shall be used, chloroform or ether. Chloroform is given in almost all abdominal operations, there being no positive contraindications. I remember Dr. Langer in a case of appendicitis saying he had no hesitancy in using chloroform. He uses chloroform, I think, equally with ether. Dr. Gerster said to me: "I think I use them about equally. In some very severe, prolonged operations, or where there is a cardiac complication, or in alcoholics, and for other reasons I give ether." I notice another feature in the surgeons at the Presbyterian Hospital. They frequently begin with chloroform, and if for any reason they think the patient would do better, they turn from chloroform to ether. They frequently begin the case expecting to do that, but in abdominal operations where there is no contraindication, they prefer chloroform. I do not think they have had anything to frighten them away from the practice. I think Dr. Lewis A. Sayre has boasted that he has not used anything but chloroform in his practice, at least with exceptions. It was a matter of interest and surprise to me that the matter stands as it does in Boston. Of course, locality prejudices do grow and grow strong; but I should say from my observa-

tions that in New York they use chloroform quite half as often as they do ether for short operations. I am interested in the discussion; it suggests a new experience in life.

Dr. WALLACE CLARK, of Utica, N. Y. This question has been very thoroughly put from the chloroform side. As to the question of chloroform and ether at the Lying-In Hospital, we have always used chloroform. I have never seen ether used there, and I think 90 per cent. of the operations in the Montreal General Hospital in my time were done under chloroform. I never during my life there administered ether. All operations, major or minor, were done under chloroform. Brought up in that way, I had no fear of chloroform. I see the feeling here is strongly against chloroform. That is a matter of local education. We were sure we had good chloroform to begin with, and that it was administered in small quantities, a small percentage of chloroform and a large percentage of air. Our mode of administering was to take a towel, make a cone with an opening at the top. Fifteen to thirty minims of chloroform were thrown on the inside and placed over the patient's face, at first a few inches from it, and gradually approximated. If you had a stronger percentage, the patient might object; but if it was held from the mouth a few moments, we had no difficulty with our patients. As I have seen ether administered, I have seen a good deal of struggling at first.

One of the prejudices towards chloroform in this country would be reasonably explained by an operation I once witnessed. I was asked to assist a surgeon at an operation. He determined to use chloroform, thinking there would be less vomiting. A friend of his who had been in the medical service during the war, — I don't think he had had any experience with chloroform, — prepared to administer the chloroform. He took the ether cone, put a sponge in it and threw in I should say two or three drachms of chloroform, clapped it over the patient's face and it was only a few seconds before he had spasm of the glottis, the man was choking, stopped breathing and here was a dangerous exhibition of chloroform. With an expression of contempt the man threw the cone from him. I offered to administer the chloroform if he would allow me, but they returned to ether.

In the obstetric use of chloroform, in doses of fifteen to thirty minims, it produces no disturbance. You ask the patient to breathe two or three breaths rapidly, and the relief comes quickly. The use of chloroform in the first stage is almost unnecessary. In the hyperesthetic patient it is desirable, and perhaps more desirable, to use chloral by rectal enema. If you commence with chloroform in the first stage, it has a cumulative action; and in one-half to three-fourths of an hour you have the patient beyond the point where she retains her senses and assists in her labor. If commenced in the second stage, the action of chloroform in my hands has always been very satisfactory. I have never seen any trouble from chloroform administered surgically or obstetrically except in this one case; therefore, I do not feel that I have much to fear in the use of chloroform. In the use of chloroform in the operation of turning or using forceps I have never found it necessary to put them under complete narcosis. They hardly know anything about their delivery, even in the primary stage of chloroform. I myself have taken chloroform very often. If I have

a tooth to be extracted I sit down, throw myself back, take a towel sprinkled with chloroform, inhale it myself and instruct the dentist when to pull. You retain your senses very much better under the influence of it. But this question has been thoroughly discussed to-night, and the gentlemen who read the papers defended chloroform very satisfactorily and said all that need be said.

DR. J. G. BLAKE: I should be sorry if any gentleman carried away with him the fanciful picture the second reader gave us of the effects of ether. That is not the experience of most of us. If it was we should undoubtedly have sought for a more satisfactory anesthetic. We have used it in obstetrics here very extensively, and as far as I know with entire satisfaction. Of course, we have had but little experience with chloroform; but we have used ether, and we have not had very many of the symptoms set forth as the result of it. I want to enter a very decided protest against that description being accepted as the true one. I have not the least objection to anybody believing in chloroform, but I should like to ask these gentlemen if their use of it followed from an unsatisfactory experience with ether. We have been brought up on ether; at the same time I don't think we are prejudiced unduly against chloroform. In general surgery we have rested content with this remedy, which is safe as far as we know. We have been free from deaths in this community from the administration of ether in the different hospitals and in private practice. Particularly in obstetrics we have not seen any reason why we should discard an agent which perhaps is not as convenient in other ways as chloroform, but which has, to our minds and in our experience, the added element of safety. That is one of the reasons why we adhere to ether and do not feel justified in discarding it. It gives our patients all the relief that is called for from the administration of any anesthetic and at the same time imperils neither mother nor child. This is my feeling. I have not had a very extensive experience except in hospitals. When in the Massachusetts General Hospital thirty-seven years ago, I etherized a great many people. For the last thirty-two years at the City Hospital I have watched its use closely. In my own ward I have not the slightest trouble in bringing about primary anesthesia in forty to sixty seconds with ether. It depends a good deal upon the manner of giving it. It is not by drowning the patient, pouring it into the eyes and trachea, but by creating ether vapor and allowing the patient to breathe it from a large cone. When this is done and the patient's fears allayed, I have yet to see the case I cannot etherize pleasantly and successfully in a very short time.

DR. EDWARD REYNOLDS: I am extremely sorry that in a Society which has been for a number of years quite as much devoted to surgical as to obstetrical work this discussion should have been limited to purely obstetrical anesthesia. I am very sorry also that a large part of the discussion has been what seemed to me *ex parte* upon one side or the other. I myself am thoroughly satisfied with the use of ether in obstetrical work, and I fail to see the particular advantages of chloroform for the great majority of obstetrical cases. The arguments used for it fail to appeal to me. We can concede, I think, its safety. Ether unquestionably is dangerous to some few cases. I remember well one hospital patient upon whom I did a difficult craniotomy,

in the days when we did craniotomies, who died (to the best of my judgment) of ether. She was a short thick-set Jewess with chronic bronchitis. She died in three days with her lungs full, I think as a result of ether. I should not etherize such a patient again. I made up my mind then to the point that a patient with chronic bronchitis ought not to be etherized. Chloroform is less irritating to the bronchi.

As regards the influence of ether and chloroform upon the kidneys it seems to me as I follow the literature that the trend of opinion is not very pronounced as yet.

But the objections which have been made to the use of ether in labor, as I understand them, are, first, that it is unpleasant to the patient. That is not my experience. I use ether at one stage or another of practically every case of labor, and I have almost uniformly found that if properly given it is hardly disagreeable to the patient. I could count on the fingers of my two hands the number of times I have seen a patient object to taking ether in labor. They almost always object to its use for surgical purposes, but when it is given in labor at the beginning of each pain and the patient is allowed to take it as she wants to, she does not object, at least in my experience. I think that where it is carefully given in labor it rarely is followed by nausea of an amount to make any trouble or to be of any importance.

It is urged against ether in labor that it is too slow to control individual pains, and that if it is given in the interval it frequently annuls the pains altogether, and thus reduces us to the use of forceps. These difficulties are to a slight degree real, I think. I believe that the use of ether does sometimes lead us to use forceps, when if the woman had been allowed to struggle along with her pain we should not have had to use them. I, for one, am glad to have an opportunity of asserting that I believe that the greatest part of the strain upon women in labor is the pain of labor, that more women are injured in health by enduring the pain of labor to an undue extent than by almost any other cause. It always amuses me to hear men talk with bated breath of the possibility of coming to forceps. I think there is a good deal about this that is ridiculous. I do not hesitate to say that I use forceps, and propose to use forceps, freely; I use them in a large proportion of cases of labor; and I do not believe that they do harm when in the hands of any man who has obtained skill in their use and who is experienced in the conduct of labor. I believe I tear no more patients with forceps than without. I am quite disposed to believe, on the other hand, that in the obstetric operations which demand complete relaxation of the uterine muscle, chloroform should be the better drug. We all know that ether does not completely annul the action of the uterus. Any man who has seen many cases will, I think, have observed his not infrequent failure to completely control the contractions of the uterus by ether, even in cases in which the patient has gone off into extremely deep anesthesia immediately after the delivery of the child, that is, with the removal of the antidote to ether, pain. For some of these cases chloroform may be preferable for those who believe its obstetric use to be safe; which I myself think we must concede to the general experience of the profession.

DR. NORTHRUP: Regarding the effect of ether on the kidneys, I desire to speak of one case. A patient

had just recovered from an acute attack of nephritis, twenty-one days after the beginning of scarlet fever. Some days later I had occasion to cut down on the mastoid cells. I don't know where my wits were, but I gave the patient ether. The patient had had bloody urine before, and about the worst case I had ever seen. All symptoms had improved, and the color of the urine was right, but there followed such a beautiful illumination of the urine after the administration of the ether for a few days that I am not likely to forget it — suppression, convulsions, etc. I had occasion to go down to the same mastoid cells a few days later, and I gave chloroform, and there was no kidney reaction, although casts had been continuously numerous from the first. I thought it was a good control experiment.

DR. ENGELMANN: I must confess I had never given any serious thought to this subject. I have for many years used chloroform and seen it used, and have never heard any arguments to the contrary — we are speaking of chloroform in labor. In fact, I think the arguments this evening are rather favorable to the use of chloroform. I have always understood it has been conceded by the friends of ether that in obstetric cases there was no danger; and that is the one element, and I think the only one, which allows us to give the preference to ether. Barring that all the advantages are in favor of chloroform. It is more agreeable; can be used at the moment when it is wanted, and in small quantity and with rapid recovery; this, I think, has been admirably stated. The application of a few more drops brings the patient to the right state, with slight knowledge of what is going on; she does not feel the pains and comes to very quickly. As to ether, I think we may eliminate all danger in obstetric operations, unless it be in extreme cases of disease of the kidney or lungs, where chloroform is to be avoided; or in lesions of the vessels, where, I think, chloroform is somewhat risky, though I have given it in surgical operations with heart disease, with an assistant extremely careful — and that, by the way, is essential to the successful giving, and I have no doubt that those who thoroughly understand the use of ether will see more satisfactory results in the lying-in room than we who do not understand. The use of chloroform, naturally, must be understood. I have always used in labor, for the relief of the ordinary pains, a few drops on the handkerchief. You can gauge that, and it is all consumed, and the patient has only so much for that pain. That is the one advantage we claim for chloroform, that its action is rapid. As we see the approach of the pain a few drops are given to carry the patient over that pain; and where suggestion is desirable, a mixture of chloroform and cologne may be used. I should say, too, if any here have used chloroform, they may have had some unpleasant experience, because I have found it difficult to obtain a satisfactory article unless I purchased a pound. We don't know what the condition of that is until we test it. It is deteriorated by exposure to light, by shaking; I have always presumed it is by frequent opening of the bottle. I have always secured six-ounce bottles; and Squibbs makes them, so that you always have a fresh bottle as it comes from the still. I have always felt, seeing the excellent results from chloroform and no injurious results, that those who use chloroform in labor use it because they become accustomed to its administration in surgery, had seen it used in the hospitals, and so it was the one agent to which they were habituated; and then I pre-

sume the power of popular influence has much to do with it. But the small quantity of chloroform used in labor, and the rapidity of its action at the proper moment should speak in its favor, even to those who use ether on account of the much greater quantity and its permanent or lasting effects. It may be safe, but it is not as pleasant and as satisfactory a remedy if you will give the chloroform a fair trial.

DR. GEORGE HAVEN: I have used chloroform in the hospital in Vienna, in Winckel's clinic, the four months I was connected with it, and I never saw a bad result from chloroform. It was very much easier to give, and the patient got relief from pain much quicker than from ether. We used it not only in obstetric practice, but in gynecological patients. I never saw on the continent ether used but once, and then the patient nearly died from the effects of ether badly given. It was given in a very confined cone, and death almost resulted from it. They threw the ether cone down and began with chloroform. Since coming home I have never used chloroform but once or twice, and have devoted myself entirely to ether in obstetric practice. I think chloroform has advantages in so far that less chloroform is used and the patient is rendered comfortable in a very much shorter time than with ether. I don't know what the community of Boston would say if chloroform was given and death should occur. I think the man would be very seriously blamed and would get a very unenviable reputation. That it is used in New York and in the South and West with immunity I think is a very striking fact. I think ether is perfectly satisfactory; and chloroform I think a little easier to the patient and a little easier for the person giving the anesthetic.

DR. A. D. SINCLAIR: I was brought up to the use of chloroform under the man who introduced it in medicine; and for a period of two years I gave chloroform to one, two, three or four every day, not knowing or fearing any danger from it. It was given freely according to the directions given by Professor Simpson, which were a few drops on a towel held a few inches from the face and gradually approximating the face. I never saw but once anything that approached danger, and that was where the patient did not recover from the effects of the anesthetic for nearly twenty-four hours; nor did there a death occur to my knowledge in the city of Edinburgh, either in any of the hospitals or in private practice during a period of two years, with the exception of one which took place at the Royal Infirmary in a patient who had heart disease. We have other things parallel to it. We give medicines a while and there is wonderful success, and then everything goes the other way. By and by we began to hear of deaths from chloroform. Every few days you would hear of deaths in the various hospitals, particularly the English hospitals.

I cannot help thinking, as Dr. Clark says, that there has been some looseness in the administration of chloroform. Not everybody does everything as he ought. There is a coarse way of doing things. I have seen men taking charge of an obstetric case, and who had taken charge of many cases, work as though they had elbows instead of fingers. One who has given ether is not fitted, unless he has especial training, to give chloroform. I think that locality has much to do with one's practice. I had no fear from the use of chloroform, and had seen ether given and given it frequently when I was house-officer at the Massachu-

setts Hospital. With both of these drugs I was familiar, and would have continued the use of chloroform in Boston on my return, but I felt that there was greater safety in ether from the fact that just about that time we began to hear of these frequent deaths. I heard a gentleman say the other day, that when he was a student in Dublin he was told that a death from chloroform took place daily at some place or other in Great Britain. I do not think that is true. Chloroform is more dangerous than ether in general administration, but in obstetric cases I don't think it is.

DR. J. P. REYNOLDS: I want to put a question to the last speaker, because I think he has a very interesting fact to mention as to safety in the prolonged use of chloroform. Dr. Sinclair will bear testimony, I believe, to its continued employment for a very great number of hours.

DR. SINCLAIR: Professor Simpson believed that chloroform was of all others the anesthetic in children's cases. In one case of convulsions in a child chloroform was administered for fourteen days; I don't know how much. The child was kept constantly under its influence a fortnight.

DR. J. P. REYNOLDS: I heard the same thing from the late President of this Society, who said that he had known it to be given for six days. I was anxious to bring that fact out. I have listened with the greatest interest to what has been said to-night, and one of the speakers expressed precisely my own feeling when he said it was greatly to be regretted that this question should be approached in a partisan spirit. I have no such feeling. I think we recognize in Boston that both chloroform and ether have proved themselves to be, at least in obstetrics, entirely innocent remedies. I for one am very glad to hear all that has been said to-night in favor of the use of chloroform, but I contest most strongly, as other gentlemen have, the account of the evils of ether. During the greater part of my life in a practice largely obstetrical I have used ether in almost all cases of labor. There is no such thing as continuous nausea under its administration. Vomiting may occur when it is first given, but not afterward. How often, indeed, when in severe surgical operations vomiting has appeared to be coming on has an operator called out: "The patient is going to vomit. Crowd the ether."

I have heard with the greatest interest what was said about the use of ether in the hospitals. I have a strong feeling that a lying-in hospital will never do its full duty to women in labor until it can provide the means for giving an anesthetic, be that ether or chloroform. Last fall I had occasion to ask the opinion of gentlemen in different parts of the country in regard to the employment of anesthesia in private practice for normal labor. I did not preserve the replies, but I read them carefully, and the result was an almost universal testimony that it was not freely used, that it was but little given in normal labor for the relief of pain. I share most deeply the conviction which one gentleman has expressed to-night that the risks of childbirth bear a close relation to the endurance of pain. We may talk of parturition as merely a physiological process like respiration, defecation or micturition, but it is for the dangerous cases of labor that obstetrics exist, precisely as when an incoming ship is in peril that men need the pilot. Whatever the so-called stage of labor the moment pain begins to tell upon the courage and strength of the woman the time

has come to relieve her distress; and, moreover, if in the latter part of the process danger is to develop in any direction, the attendant has in this way done his best service by guarding the strength of the patient and her power of vital resistance.

Something has been said of the method of giving ether in labor. I have learned to think that ether in obstetrics is best given to the exclusion of air. My own plan takes no concern for the access of atmospheric air. I cover the mouth and nose, and do not care to leave any aperture at the end of the cone.

As to hemorrhage, I bear like testimony with that given so impressively in this city by the late Dr. Fordyce Barker. He did not believe that anesthesia predisposed to hemorrhage; he should rather say that the cases in which he had seen post-partum hemorrhage occur were those in which for some reason or other no anesthetic had been given. He was speaking of chloroform. My own experience with ether is precisely that.

DR. ENGELMANN: If I recollect aright, among the many interesting facts given us by Dr. Reynolds at the time of the ether celebration, he spoke of the neglect of the use of the anesthetic, that is, of ether in labor, because it might prolong the labor a half-hour or so. It struck me at the time, because I should say with chloroform we expect to shorten the time of labor; and then I think he mentioned there (he did here) that the use of anesthesia, that is, ether, in labor was diminishing. Throughout the West and South it has been my experience that the use of anesthesia is increasing, that is, chloroform. I want to know whether he means that in the region where ether is given that less is used in labor than formerly.

DR. J. P. REYNOLDS: The address to which the gentleman refers was prepared without means of consulting authorities or taking advice of professional friends. It was not until the night before I delivered it that I had the opportunity of reading once more the statements of Dr. Barker that I had quoted only from memory. As spoken, the address made it clear that Dr. Barker had in mind chloroform. My assertion that anesthesia was little used in normal labor even with private patients was based on replies from gentlemen in parts of the country where the anesthetic employed is almost exclusively chloroform. In several instances chloroform was mentioned as the agent.

DR. J. B. BLAKE: I have a few notes on the after-effects of ether in entirely surgical cases. The reason for giving ether at the City Hospital in surgical cases is because we are taught, and have known from large statistics in this country and in England and those quoted by Gurlt in Germany, that the deaths after anesthesia were six for chloroform to one for ether. Those were taken, as I say, throughout the Continent and correspond very closely to the results found in England and the results in America. That fact, however, does not do away with the equally well-known fact that following ether are certain undesirable effects which exist and have been to a certain extent underestimated. In the last three months I have observed the cases that came to operation on the Third Surgical Service at the Boston City Hospital, and questioned the patients as to the after-effects. The result is as follows: In 158 cases of various sorts of operations there was more or less vomiting in 53, or 33 per cent. The frequency of vomiting varied considerably with the experience of the person who gave ether. One

of the surgical dressers, who was in his sixth month of service, had a percentage of about 5 per cent. instead of 33 per cent., showing that with the greater experience of the anesthetizer there was a less amount of vomiting. Patients were all given ether breakfasts. The vomiting was, as a rule, moderate in amount. In three or four cases it was excessive, in one-fourth very slight.

Another symptom noted was nausea distinct from vomiting. In 94 cases questioned for this symptom nausea was present in 38. Nausea did not necessarily coincide with the vomiting, but came in certain cases without vomiting, in certain cases with the vomiting, and in certain cases was not mentioned, although vomiting was severe.

Frontal headache existed in 36 out of the 94 cases, and lasted, as a rule, two to four hours. In only two cases did it continue during the night of the operation.

The final point investigated was cough; and in 18 cases the patient spoke of having some slight cough the day of the operation. In three cases the cough lasted twenty-four to seventy-two hours, and in two was accompanied with a certain number of moist râles in the chest.

In 20 only of the 94 cases was there an absence of all symptoms. I do not know of any similar recent compilation of statistics in regard to chloroform, and I should be very glad to hear of any.

DR. J. P. REYNOLDS: I ought perhaps to say that lately, in looking over my own records, I was surprised to find here and there a note that I had withheld or abandoned ether in a given case because it seemed that the patient's pains did better without it.

DR. C. B. PORTER: I had no thought of saying anything when I came here, but I feel as though I ought to say something, having had experience so many years in the administration of ether. I was brought up by one of the strictest adherents of ether, Dr. Bigelow, who up to the very last years of his life tried to investigate every case of death said to have been caused by ether; and I have heard him make the statement that in all cases there was some other definite good cause than the ether. I myself have had now something like thirty years' experience in giving ether, and I have never had a death from that cause. I remember but one death that has occurred on the operating-table in my hands, and that was a case of long-standing strangulated hernia brought in almost *in extremis*. I think Dr. Sinclair said that those who are accustomed to give ether ought not to give chloroform unless they had especial training; and I should say those accustomed to give chloroform do not, unless they have had especial training, understand how to give ether. Ether, in the majority of cases, can be given very expeditiously, very safely, without vomiting, if the person who gives it understands its administration. It is the one thing I have felt that our young men do not understand unless they have had the personal hospital experience, and even then they do not comprehend all that is essential; and for that reason for the last two years special instruction has been given to the students in the matter of administering ether.

I have been very much interested in hearing what has been said by the gentlemen who have been accustomed to give chloroform, and have been also very much pleased to think that it has been given in their hands with so much safety. In this block within the last two weeks I promised to give chloroform because

my patient disliked ether; and I took the trouble to read up the subject of the rules of the administration the night before. I gave the chloroform myself, because I said if anything happened to the patient I wished to take the blame and not have it on my assistant's hands. I gave a whole ounce on the handkerchief, and spent an hour and a quarter trying to get him under the effect and then gave it up and pushed the ether. It was because I did not understand the administration of chloroform, because I etherized him in a very few minutes. I can but say, as I have followed the commissions on the other side of the water, it seems to me there has been a constantly increasing tendency to use ether and give up chloroform.

DR. H. L. BURRELL: There are four classes of cases in which for the last five years I have been in the habit of using chloroform. I think possibly a half-dozen times during the course of a winter I use chloroform. I do not mean in all of these cases that I use chloroform every time, but I always consider whether chloroform or ether is best for the individual patient. The classes of cases are: first, head operations; second, where there is any obstruction to respiration, and especially in tracheotomies; third, where I know there is a chronic bronchitis; and, fourth, where there is a strangulated hernia.

DR. RICHARDSON: I have been very much interested in the discussion of this subject. As everybody knows, we use ether almost exclusively, and have no fault to find with it. I believe we are coming to use chloroform a little more in general anesthesia, especially in cases in which anesthesia must be used, when there is a bronchitis or any lung trouble and when the kidneys are much affected, but even in such cases I think the dangers of ether are very slight. I do not recall a case in which there has been a death from ether. Cases have died during anesthesia, but they have been cases which would die probably just the same without anesthesia, as I recall them, particularly cases of strangulated hernias, which seem to be particularly liable to sudden death. With the use of ether we feel perfectly safe, as Dr. Blake has said; and we do not know how to give chloroform, as Dr. Porter has said. I remember seeing one of the strongest advocates of chloroform use it to wire a jaw; and he used chloroform until he got tired of it, and then used ether to produce anesthesia. That was the first time I saw chloroform used. I don't know anything about the use of chloroform or ether in obstetrics.

I think the strongest argument in favor of ether as a general anesthetic is the fact that we feel sure the patient will come out of his anesthetic, and we shall not have that terrible misfortune of sudden death in the course of anesthesia for a trivial operation. If we are doing an operation which carries a large mortality with it, that is one thing; but if we feel that every time we produce anesthesia for the opening of a felon or an operation for fistula, that the patient may die on the table, I for one should not have any peace of mind whatever in approaching these trivial operations. I dare say we do not know how to give chloroform, but I have always understood that the dangers of chloroform were without premonition.

DR. J. B. BLAKE: I don't want our guests to leave Boston with the idea that preferring ether was a Boston fad at all. Our apprehension of chloroform is founded on the statistics of death from its use, and works on surgery furnish a sufficient justification for



our not going away from a safe though perhaps not as convenient an anesthetic as chloroform. Recent writers give the situation as one death for every 3,000 administrations. The percentage seems small, but we do not have even a sixth of that with ether; and so when we have this safe agent we feel disinclined to run the risk of one death in 3,000. I am not referring to childbirth.

DR. F. B. HARRINGTON: I had always used ether for primary anesthesia until two years ago, when I was induced to try chloroform. I found that patients liked it better, that it was more convenient, and that it was speedier. I don't think there is much nausea after primary anesthesia from either anesthetic when properly used.

About six months ago I gave chloroform in order to explore a sinus, and I nearly lost the patient, although she had taken only a few inhalations. I have not used chloroform since, and do not intend to use it, except for those cases in which it is universally recognized as superior to ether. The question is one of safety. I feel that the disadvantages of ether are more than offset by its greater safety. The deaths from anesthetics are not numerous; but one cannot forget that they are six from chloroform to one from ether.

DR. A. WORCESTER: I am quite sure our guests will go away with a clear understanding of the reason why chloroform is not used in Boston; for if chloroform fails to produce anesthesia in the hands of our very able surgeons, no wonder it is not popular. I am sorry the discussion has wandered from the lines laid down. Our real purpose was to discuss the relative merits of ether and chloroform in labor; and not the slightest intimation has been offered that it ever did any harm in its obstetrical use. I think nobody who has used both has failed to admit that its use is very much more agreeable to the patient, which ought to count for something. The facts that it is more pleasant, that the patient comes out more easily and can be relieved of pain and at the same time not made wholly unconscious, are advantages that with any obstetrician certainly are very weighty. I am sorry that my description of the use of ether in midwifery practice is taken too seriously. I did not mean that every time ether is used such would be the result; but I am just as sure that such untoward results and the necessity of using forceps are sometimes due to the use of ether. I believe in ether. I should rather favor it if I were to be put under an anesthetic for fourteen consecutive days. I believe that ether is better in prolonged operations. But I also firmly believe that chloroform is better in normal labor in relieving the woman in the second stage and in the stage of delivery. I believe it is not only perfectly safe but that it ought to be given. There are a few gentlemen who use ether in almost every case; but the practice in this community is not to give an anesthetic in normal labor. We are behind the times. Women ought to have an anesthetic, and the reason anesthesia is withheld is because their physicians insist that they can be more safely delivered without an anesthetic. The reason physicians so insist is because they know only the disadvantages of ether and are not acquainted with the advantages of chloroform; and it is a pity and a shame in a centre so advanced as we hope Boston is in other respects that generation after generation of physicians should be sent out of Boston who do not know how to use chloroform.

DR. CHARLES M. GREEN: I confess that I am surprised at the picture drawn by Dr. Worcester of a case of labor conducted with ether. I have always used ether in the manner described in my opening remarks; and I have never witnessed such a deplorable spectacle. On the contrary, my patients have expressed their gratitude for ether, and have seldom shown any disagreeable effects, such as bronchial irritation and vomiting. I acknowledge that Boston is a small, conservative and provincial town; but I think I may claim that we have learned how to use ether. Moreover, we like to arrive safely at our destination, even although we take a slower steamer, with smaller state-rooms and poorer table perhaps. The advocates of chloroform anesthesia have not yet explained away the facts shown by Gurlt's statistics, that the fatalities from chloroform are from four to ten times as many as from ether: until they do this, I shall myself prefer to "hold fast that which is good."

DR. PORTER: When in Vienna and watching Billroth operate, he gave ether, as he said, and the patient was supposed to be etherized. Billroth commenced to cut, whereupon the patient sat up on the bed and delivered one of Cicero's orations, and was pushed back on the table and more ether given. Even as great a man as Billroth did not understand the administration of ether.

DR. WALLACE CLARK: In reference to the point that chloroform does not nauseate: in deep narcosis we nearly always have nausea; in primary anesthesia we do not have it. I very seldom use chloroform without finding, as they are coming out or going in, that they do vomit.

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(Continued from No. 8, p. 186.)

### DISCUSSION ON ATROPHIC RHINITIS.

DR. CASSELBERRY spoke of its Nature and Symptoms. He said that there are in reality two forms of this disease. One occurs in children and the other in old people. Another division is into fetid and non-fetid. No one causative theory answers for all cases. The atrophy might be due to one cause and the fetor to another. Still another division of the cases was into the simple dry, and into the ozenatous varieties. All stages of atrophy could be seen leading up to the degeneration of the mucous glands and the formation of crusts. The non-fetid variety is more common in elderly people, while ozena occurs more frequently in early life. In some cases the two types seem to blend.

One cause of the disease may be some disturbance of the local peripheral sensory nerves. The nostrils become less sensitive and the pharyngeal reflexes more sluggish. The nasal bones and cartilages become affected, and the nose assumes a similarity to the saddle-back shape seen in syphilis. The nasal tip is tilted up so that the anterior nares look forward rather than downward. Another theory as to causation is that of a primary central trophic neurosis. Congenital malformations may lead to atrophic rhinitis from poor ventilation of the nasal chambers and stagnation of secretion. Syphilis, tuberculosis, alcohol