ANTISEPTICS.

Read in the Section of Practice of Medicine and Physiology, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C. May, 1891.

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There has been a decided tendency for the past few years on the part of persons affected by the antiseptic and germ theories, to make it imperative on those who practice midwifery, to obey the rigid antiseptic rules laid down by teachers. I saw somewhere that in a discussion on the necessity for antiseptic measures during parturition, and their continuance during the lying-in period, a prominent physician said "that if he should be called on to testify, in a prosecution for malpractice where death had occurred during confinement and antiseptic precautions had not been used, he would certainly testify that it was criminal malpractice." This was an alarming threat, as it placed practitioners of midwifery in constant peril, and it impelled me to speak to our County Medical Society about it, and to urge them to make some preparation for such an emergency. The Society then appointed me to procure from practitioners of long experience—men who had attended hundreds, and even thousands of women in labor—statistics in relation to the fatality caused by peritonitis, during their many years of attendance on puerperal women. While a student of medicine in 1827 I had my first case of labor. Then there was no dread of puerperal fever being caused by germs, introduced into the uterus or vagina by the hand of the accoucheur, but the few cases which did occur were attributed to the powerful, long-continued uterine contractions, or to injury by the forceps, with laceration and subsequent inflammation of the parts, and to extension to the peritoneum. What obstetrician has not known how sore and tender, on pressure, the womb oftentimes was, when pressed upon soon after childbirth—even before Credé began his unnecessary and heartless wrenching and punching of it—and yet rarely did puerperal fever occur. So with this view of things I started in this specialty and kept at it for sixty years, attending more than three thousand women, ever amazed by the fact presented to me of the rare instances of mortality attendant on gestation and childbirth; the latter process and after-treatment of the mother being often attended by conditions which would now be considered extremely perilous to life, in almost every instance, by those who are pressing on us the use of antiseptics, to secure safety to puerperal patients. In those days our education in midwifery was little more than the details needed to conduct an ordinary labor. Oh! how poorly I was fitted to aid the patient in her apparently perilous work; and after the labor was over, how worse than useless, even dangerous were some of the well-meant measures of the

nurse. As soon as the child was born, a bowl of "tiff"—gin and water, or whisky and water sweetened—was given to the patient—nor was the doctor forgotten—and then for many days, as drink, hot teas, balm, pennyroyal and others, but not a drop of cold water. Such was the custom, but never mine. Forbidden as it was, I insisted on cold water as drink. I had attended a good many cases and had often, on my after visits, been met, on entering the room, by an odor recognized as that of putrid blood, and so offensive that it was unpleasant to remain there. I spoke of it to the nurses, but they said it was always so, and as I was a mere boy, when compared with the venerable matrons who, in those days, ministered to the lying-in women, who were so neat and clean in their own persons, I concluded that the "cloth" had perhaps remained there too long, and that its removal would do away with the fetor; so gave directions to have a fresh one applied, and went away. So things went on in most of the cases for a year or two. As a general thing the fetor was very evident for a week or more, and finally was so bad in one case, that I determined to see what condition the patient was in; when lo! I found that she had not had a single washing of the genitals and contiguous parts, or a removal of soiled clothes since the end of the labor, though a whole week had elapsed. On expressing my surprise and disgust that the nurse had left her in that condition, and without a regular cleansing every day, I was told that it was not the custom to do so, through fear that the washing and change of clothes would cause her to "take cold." I had succeeded an aged practitioner in that region, and so I suppose the practice had gone on during many years with the nurses for the majority of lying-in women. If these women thus treated, with no antiseptic measures before labor, none during it, nor afterward for the proverbial "nine days" which were to complete the lying-in period, passed safely through this ordeal, and repeated it again and again, not one in many hundreds suffering from puerperal fever, is it reasonable that other precautions are more needed than those of cleanliness obtainable without the use of antiseptics, which are now so much used, and which, from their poisonous nature, have in some cases caused the death of the patient?

From the first days of my practice up to the present time, in threatened abortions or miscarriages, when there was slight hæmorrhage going on, a like fetor has been noticed in nearly every case (when the clothes were raised in order to examine the patient), day after day until the ovum was cast off; the vagina being filled with clotted and putrid blood. The justly celebrated Professors, Dr. Chalkly James and Dr. Wm. P. Deucer, teachers of midwifery in the University of Pennsylvania sixty-two years ago, directed us in those

cases to tampon the vagina, so that the woman would be safe during the absence of the physician, but every day to remove it, and have a fresh one to take its place, or the same one washed and soaked in vinegar and then replaced. Thus I have sometimes had cases go on from day to day for nearly or quite a week, before the uterus was sufficiently opened—we did not force it open then—to remove the ovum; and seldom have I known anything more offensive than the sponges and putrid blood which were in the vagina, when I attempted their removal, and yet in not a single case in all my sixty years of practice did any of these patients suffer from puerperal fever, or peritonitis, or any other fatal affection of the pelvic organs. In such cases the woman was often examined to ascertain whether or not the abortion was likely to occur, or whether the ovum could be removed, and it was sometimes—often, indeed—necessary to remove the ovum, or the secundines through which the fœtus had slipped, leaving them in the womb, but the patient, though sometimes pale and weak, would soon rally and be herself again.

Why then, I ask, if by such practice—whether it was right or whether it was wrong—no harm came to the patient, so far as life was concerned, need we now, when we have good nurses and great cleanliness enforced, use antiseptic precautions and measures or be in danger of criminal prosecutions based on the testimony of obstetrical experts, who see infectious germs under every finger-nail, yet who have never attended half a dozen cases of labor and do not know that we object to the use of antiseptics because several women have lost their lives by the use of them as directed by the germes, though thousands of women in our State suffered abortions every year and got well without a set-back. Two days ago, a physician who has practiced for twenty years and has had a large practice, five cases last week, wrote to me: "As for germs, if they are as numerous and as rampant as writers and teachers would have us believe, then almost every puerperal woman in the country ought to die of peritonitis. The scrubbings and squirrings may be all well for hospitals, but in communities of decent people, they seem to me useless and worse than useless." Very recently a writer has given us his opinion, that the physician should take charge of every woman, whom he expects to attend during labor, at least three months before the time of expected labor, and direct her diet, and baths, and everything that aids in keeping the infectious germs at a distance. And about two years ago another physician gave a caution to those of us who might find it necessary to use a rectal injection, to be careful not to let the germs in by that back-door. Why these great fears? Are not women now as they were fifty or sixty years ago and have always been since that time? And did not they

then pass through the labor process under less favorable conditions than now, and yet without peritonitis in more than one of a thousand cases? and even that *one* perhaps the result of violence and not caused by germs. And yet were not the germs as numerous then as now? Ah! here the germes possibly have me; for half a century ago farmers grew potatoes without difficulty; they put the cuttings in the ground and they grew again. Nothing disturbed them; but now what a change! They are planted, send up their stalks and leaves and give promise of a crop; when lo! in a single night, the potato-bug. The beautiful black and gilded germs fasten on the growing plant, and if the Paris-green, the germicide, be not at hand, the plant dies from the destruction of its lungs. So, it is plain that one generation may have no secret, deadly enemy to bring death to happy homes, and yet the next have one. But is it so here? Certainly not. The man who practices alongside of the frightened antiseptic doctor sees not, fears not any venomous germs, and his patients rise from their beds happy in their love of offspring.

Counting but ten miscarriages to every hundred labors, I must have had more than three hundred in my practice, very many of them—indeed, nearly every one of them, being in the condition described above—the vagina, and sometimes the uterus, containing putrid blood for many days, and yet not in a single case did peritonitis occur. The same conditions have been presented to thousands of other physicians in cities as well as in the country.

As we are now directed by teachers to use the rigid antiseptic measures of the present day, even when attending the healthiest woman, and though no infectious disease prevails in the neighborhood—and threatened with prosecution if we do not—it is pertinent to inquire what has been the result in the last fifty years in the practice of physicians who took no precautions against carrying infectious diseases from patients whom they were attending to those women to whom they were called when in labor.

As I was not more successful in my obstetrical practice than other doctors, an account of my experience in this branch of our business will fairly represent the practice and results of the profession for the whole sixty years during which I was in active practice, 1828 to 1888. When attending patients ill with measles, scarlet fever, small-pox or erysipelas, I visited my other sick people, including puerperal ones, the same as though I were not attending an infectious disease. There were but few cases of small-pox came under my care—not more than 15 or 20 perhaps, in all my long practice, and only two proved fatal. One, who recovered, I not only visited as a physician, but through the refusal of the "Poor Directors" to receive him at the almshouse, and the fear of

the family in whose house he was, I felt compelled to visit him twice daily and attend to all his wants during all his illness. I visited families without taking any precautions against conveying the infection to puerperal or other patients.

Scarlet fever prevailed greatly at times during my first thirty years of practice. In a severe epidemic of it, one winter, I had more than eighty cases. Every day of that winter I was in attendance on them, and during that time had many obstetrical cases, and in my sixty years of practice I, of course, had many hundreds of cases, and yet I did not carry any scarlet fever germs to infect a single lying-in woman, though I sometimes went directly from attendance on these cases to the woman in labor. Even more than that; when my children, nine in number, had the disease at different times, two or more at a time, and I nursed them and slept in the room with them, I went, if called to a case of labor, straight to the patient without taking any precautions against conveying the disease to the woman. Some persons, even at that time, inclined to the belief that the infection of measles, scarlet fever, small-pox, and notably erysipelas, might be carried from the infected houses in the clothes—not under the finger nails—and therefore changed their clothes if attending small-pox patients. At that time the dirt under the nails was not known to be the nidus of germs, and washing and scrubbing the hands for the special purpose of dislodging them was an unheard of process.

I believe as fully in the infectious nature of measles and scarlet fever as I do in the contagiousness of small-pox, and yet in my visits to families where the children had never had these diseases, I never carried it to them from other infected patients. If there be danger or a possibility of the infection being thus conveyed by a physician, I think my exemption from being a carrier of it must have been due to the short time spent in the sick room, or to the sometimes long ride in the open air to the next place visited. Even more dreaded than the three diseases is erysipelas as a cause of puerperal fever. As with the others, I took no precautions. If attending a case of erysipelas, if a call were made on me to go to an obstetric case I went at once without using other precautions than with the other three diseases.

Here allow me to report a single case: January 17, 1860, I was called to Mrs. Rey, a young wife within a few days of her expected labor. I found her with enormously swelled œdematous labia, which kept her limbs widely separated. There was an erysipelatous redness covering them. Measures were used to relieve her, though with little change in the size of the swelling, while the erysipelatous redness increased in intensity and extended to the contiguous parts of the thighs.

On the 20th I was called in haste, as she believed labor was approaching, but as the pains were trifling I left her, after waiting a couple of hours, and from that time was frequently with her until the 23rd, when the child was born alive. The labia were then greatly discolored and before her death, on the 29th, sloughed badly. Peritonitis was evident soon after her labor terminated, and was the cause of her death.

Now, between January 17, the day of my first visit, and the 20th, when I was with her two hours, I attended two other women—Mrs. Henderson on the 17th and Mrs. W. on the 19th. And on leaving Mrs. Rey on the 20th, at eleven o'clock P.M., was in attendance on Mrs. Righter at one A.M. on the 21st, and assisted in her parturition. From this statement it appears, not only that I was visiting and in attendance on the first three during their labors, while in daily attendance on the erysipelatous case, and that in two hours after I had examined Mrs. Rey, or had attempted to do it, but failed because the labia were so swelled that I could not succeed in reaching the os uteri with my finger, I was in attendance on Mrs. Righter, and continued with her for some hours, occasionally examining to mark the progress of the case. And after this, when Mrs. Rey's labor terminated, I continued to visit Mrs. Righter and the others as often as was my usual custom, and they all did well. I know full well that all this is not conclusive proof that the poison of infectious diseases cannot be carried from one person to another in the usual way of visiting patients, and in labor of handling them, but it is strongly against such a probability. I have merely stated facts, carefully recorded during many years of practice, for the consideration of readers. When, in 1863, I published two thousand three hundred and thirty-seven cases (afterwards swelled to three thousand and thirty-six) I discovered that few, if any, physicians in our populous country had careful records of their cases, but that they had to depend on their memory if they wished to speak of them in after years. What I have written here is from a careful record made thirty years ago, when I had no expectation that I should ever again have need to refer to these facts. And now when I add that in all this long practice of sixty years, and in profound ignorance of poisonous germs being carried in my clothes, or in the dirt—when there was any—under my finger nails, that though in attendance on 3,036 women in labor, I never once carried an infectious disease to them, I feel that I might rest my case here. But I prefer to add the experience of some experienced physicians in relation to the occurrence of puerperal peritonitis in lying-in women. Professor Traill Green, M.D., of Easton, Pa., known to the profession everywhere in our country, has practiced fifty years, and on enquiring of him in relation to the now

dreaded puerperal fever he replied: "I have been so happy as to have no case of puerperal fever, and I think it has been very rare in the practice of fellow practitioners." Would it be possible, think you, to convince this experienced man who has watched by the bedside of suffering women during half a century, that it is now necessary for him to begin, three months before a patient's expected labor, to visit and prescribe for her, regulate her diet, direct the times for taking exercise, advise her when to bathe, etc., healthy so she be, and when the labor has begun, to scrub his always clean hands, dip them in a solution of corrosive sublimate, bathe the genitals of his patient with it, throw some of it into the vagina, and even into the uterus, keep it by his side, so that he may dip his hands in it every time before "touching" his patient; and then when the child has come and the placenta been removed, to throw a solution of corrosive sublimate, by means of a powerful syringe, into the cavity of the womb "to wash out the blood clot?" I repeat, do you think he would believe such proceedings necessary?—even if we had never heard of the many deaths which have occurred from antiseptics having been used to wash out the uterus after delivery?

But let me pass to other testimony. Another friend of mine, a graduate of the University of Pennsylvania, 35 years ago, a man of undoubted truth, writes: "What nonsense is all this stuff about perineal pads and douching the vagina before and after labor, and antiseptics in obstetric practice? However useful and necessary a certain amount of it may possibly be in lying-in establishments, it seems useless here. I have never had a fatal case of puerperal disease, and have seen but three or four in consultations."

Dr. Wilson, of this county, and a member of the County Society, writes: I have been in continuous practice for twenty years and have always had a large obstetric practice, my cases numbering between one thousand and fifteen hundred, and *have never lost a woman* (italics mine). I have never, as a rule paid much attention to antiseptics. In fact I have always looked upon labor as a physiological process, and the less it was interfered with the better the results.

Dr. J. B. Carroll, of our society, writes: "In fourteen years' practice there has only been one case of puerperal fever."

Dr. J. B. Walter, of Bucks County, says: "In 22 years' experience I have had considerable obstetrical business—five cases last week—and only two cases of peritonitis. One of them arose from a lacerated cervix; was very ill, but recovered. The other was a metro-peritonitis, resulting primarily from over-smartness, and secondly from unjustifiable battering and bruising of the uterine tissues, by a rather eminent man, who needlessly, after two hours successfully turned, and

with my aid delivered a dead body, to be followed in a few days to the land of shades by the mother. In this case all needful antiseptic precautions were taken."

Dr. D. Colvin, of Clyde, N. Y., replies as follows: "Though compelled to relinquish active practice for a time, yet I can report attendance on 1,279 cases, exclusive of consultations. I have never lost but one woman, and she died a few minutes after the placenta was removed. In not one single case have I ever used antiseptic treatment, and have never had a case of puerperal peritonitis, but have seen two or three in the practice of others."

"When I think of the hundreds of women whom I have delivered in log-houses and board shanties, long before the antiseptic treatment was thought of, and have seen those women up in a few days, and caring for their children, with their health unimpaired, not one of them dying, it teaches me that the caution given to us by our old professor of midwifery: 'Beware of Meddlesome Midwifery,' was timely and proper."

"My father, too, was in practice from 1817 to 1876, and I know of only one case of puerperal peritonitis in his practice."

Thus could I go on with just as strong testimony from a thousand country physicians, but it is not necessary, for I would be told of the wonderful achievements of our present surgeons, due mainly, as the germes believe, to the use of antiseptics in their operations. Their success has been marvelous; but was it due to antiseptics? Are there not many successful surgeons and gynecologists who do use them? What stronger testimony can be given for the success of surgeons who use antiseptics, than have been given by our own Goodell, Sutton, and Joseph Price, and Lawson Tait of England, of their unrivaled success in surgical and gynecological operations, by cleanliness, without the use of antiseptics in the surgical treatment of puerperal and non-*puerperal* women?

As their testimony is not at hand I quote from Dr. George Dean, of Spartansburgh, S. C., who spent some days on a visit to the Gynecian Hospital, in Philadelphia, under the supervision of Dr. Joseph Price and Dr. Charles Penrose. "This hospital is a model in its way. It is new and small and lacks many conveniences of some other hospitals, but the lack of them is more than counterbalanced by the skill and enthusiasm of its chiefs, and their determination to achieve a success for it second to none in the world. It already stands at the head of such institutions in the United States. I witnessed many operations there—abdominal sections and plastic operations upon womb and perineum; success in every case followed. I have seen pustules as large as small intestines, adhesions so great that the bowel would tear before the adhesions would break,

and all anatomical relations obliterated in the pelvis, and yet these patients made an uninterrupted recovery." To this I may add that in the Gyneccean Hospital in a series of 80 consecutive cases there was not a single death—and that in one hundred sections, done in alleys and courts in the service of the Phil. Dispensary, but a single death occurred, and that was done by an assistant. In not a single case were chemicals used. There is a disposition in some—many—eminent physicians to discredit the statistics of those general practitioners in the country who report a light mortality in their hundreds of cases. They will, I feel assured, question the testimony of Dr. Traill Green and the others cited by me, and I desire to add a few more to the above, just as reliable. Dr. Kemper of Muncie, Ind., in *Medical and Surgical Reporter*, June 22, 1889, reports 900 cases of which only two women died, one of puerperal convulsions, the other of pneumonia. He also reports that Dr. J. T. Chenoweth had 1,600 labors with only one death; Dr. N. T. Chenoweth 708, 2 deaths; Dr. A. H. Farquar 500, 2 deaths; Thomas Botkin 525, 5 deaths; Dr. J. S. Blair, 419, 2 deaths; total, 3,752 with 12 deaths; less than one death in 300 attended—and no antiseptic precautions taken. He pertinently remarks, "I have the honor of a personal acquaintance with the physicians mentioned, and I trust them as implicitly as I do physicians in lying-in hospitals. I am not aware that a country practitioner is more prone to exaggeration than his city brothers, or that falsity was indigenous to rural localities."

Dr. William F. Mitchell in "*Reporter*" of Oct. 5, 1889, gives the following testimony. That he has been in practice 24 years, has had more than 700 cases; has never administered, or caused to be administered to any woman any antiseptic remedies before or after parturition, and has never lost but one woman, and she was confined prematurely and under all the circumstances could not have expected to live. I prefer generally to present the testimony of others rather than my own, but I may say here that my 3,036 cases are confirmatory of what has already been given by the practitioners alluded to. A detailed account of them may be found in *New York Medical Journal* for May 15, 22 and 29, 1886.

Tedious as I have already been, I must go further, as this is an important subject, and get some testimony from "abroad." In the American Medical Association JOURNAL of December 28, 1889, we have Dr. Bantock's views of Listerism. Allow me to briefly state some of his facts. He says, that in 1881 only Mr. Lawson Tait and himself dared perform operations without using the rigid listerian details; but in 1889, in England, it was a rare thing to see the spray used at all; and in the Samaritan Free Hospital it has been discarded by all his colleagues with one ex-

ception, and that this is due to the superior results obtained there, since he resorted to a more rational and simple method. Speaking of ovariectomy he records it as a fact, that from April 1883, to October 1888, 3½ years, he did not lose a case in the Samaritan Free Hospital in a series of 90 cases, while during this period the deaths under the listerian system exceeded 12 per cent., and his patients recovered with less pyrexia than did those under the carbolic acid treatment. For his hands, sponges and instruments, he uses no antiseptic—only plain water—regards water that is fit for household use, suitable for the purpose of any operation, and has no hesitancy, if too warm for his hands, to cool it with cold water fresh from the tap—as, for instance, when washing out the abdominal cavity. As a covering to the wound he uses simple absorbent gauze, innocent of any germicide, and such is his belief in its harmlessness, that were it not for other considerations he would leave all his wounds exposed to the air, as he has sometimes done in amputations of the breast. He attributes the bad results which so often occur from washing the peritoneum to the employment of antiseptic material in the water, which becomes absorbed, or in some way poisons the patient. We know full well, that some persons are peculiarly sensitive to the toxic action of corrosive sublimate and that, though in a majority of cases no harm may result, yet occasionally a case is met with in which this idiosyncrasy exists. This is the only rational way of accounting for the large number of deaths due to the use of carbolic acid, and more especially to corrosive sublimate.

He therefore protests against the use of so-called germicides in flushing the peritoneum; and cannot insist too strongly on confining the surgeon to plain water as at once perfectly innocuous and thoroughly efficient.

It appears from what I have written, that there is real danger to the woman from the use of antiseptics—more danger than there is in the practice of the physicians who do not use them. As confirmatory of this, let me refer to what has happened in the Nurses' Home and Lying-in Charity Hospital at the corner of Eleventh and Cherry streets, Philadelphia; a new building erected for the special purpose, I have been told, of illustrating the value of listerian treatment. Quite recently it had to be closed, because of a virulent epidemic which occurred within its walls. Surgery was done there as well as obstetrics, and reliance was placed upon chemical solutions, and everything done was under the supervision of careful and able surgeons and gynecologists. How does this compare with the Gyneccean hospital? Not at all. The success of the latter is in direct contrast with the failure of the former.

Need more be said? No. The testimony of Dr. Traill Green, known as he is everywhere as a

man of truth and honor, who has practiced midwifery for half a century, should convince every right-minded man, that there is no need that country physicians should take the precautions against germs, so strongly urged by the advocates of listerism. But Dr. Green is sustained by other good men whom I have named and thousands of others whom I could name. No, I need say no more, for if one were to rise from the dead and give like testimony, the antiseptic enthusiasts and laboratory practitioners would still discredit the testimony of the bed-side practitioner.

SOME CLINICAL EXPERIENCES WITH EUCALYPTOL.

Read by Title in the Section of Medicine and Physiology at the Forty-Second Annual Meeting of the American Medical Association, held at Washington, D. C., May 5, 1891.

BY I. N. BRAINERD, M.D.,
OF ALMA, MICH.

During the last ten years I have often prescribed eucalyptol in bronchial and pulmonary troubles. From this experience I have learned to put a high therapeutic value upon it in some respiratory affections, viz.: chronic bronchitis, persistent cough, chronic interstitial pneumonia, and to a less degree in tuberculosis.

The following list of cases taken from my later experience, furnishes a reasonable amount of proof of its utility:

Case 1.—Miss Bellard, aged 19. This lady called upon me in August, 1888. She complained of malaise, and some pain in the left lung. She had only a moderate cough and a limited expectoration. The temperature was 99°. Auscultation revealed a harsh and catchy respiration in the upper lobe of the left lung. A trifling dulness on percussion could be discovered in this region. I gave the girl eucalyptol, and had her visit my office every fortnight for half a year. She so far improved as to lend expectation of her recovery. Then, school beginning, she started to school. As cold weather came on, she was chilled one day in school, and developed a severe croupous pneumonia. For this she was treated by a physician in her town, but not recovering, I was called to see her. Resolution did not take place as it should, and I advised the mother that the girl would never recover from this sickness. After a few weeks she died. I believe that except for this intercurrent pneumonia, this girl would have continued to progress to a recovery from the phthisis. For a whole year she improved until she felt nearly as well and strong as ever. Then she sickened with pneumonia and died in two months.

Case 2.—Mrs. Thompson, aged 30. This lady called upon me in September, 1889. She was emaciated to a skeleton, had hectic fever, pulse about 90, cough with some expectoration, and tenderness on percussion over both lungs. The respiration was catchy and frequent. She had almost a loathing for food and scarcely strength enough to come to my office. She had been ill for many months. I put her upon eucalyptol and cod-liver oil. She rapidly improved in all respects, and ceased to visit me after about two months. I had her under observation until all the objective symptoms, including the catchy respiration, ceased. I see her occasionally. She says my prescription has made a new creature of her. She is in her usual flesh and is doing her own work.

Case 3.—Mrs. Morton, aged 26, called upon me in September, 1889. She had a miscarriage in the spring. Upon rising from this sickness she took cold and developed a cough and soreness through the lung, from which she did not recover all summer. Neither did her menses reappear. She is from a consumptive family. These things alarmed her somewhat, and she applied to me for aid. Her respirations were harsh and catchy, and her cough was quite troublesome. I gave her a prescription containing eucalyptol, and have had her under observation ever since. Her respiratory murmur is all right and she has menstruated once or twice since, and now seems to have gone into her menopause at this early age. She is in perfect health.

Case 4.—Mr. Bradford, aged 30, called upon me in December, 1889. He complained of a pain in his chest and an inability to take deep inspirations with ease. Work involving the use of the pectoral muscles, as chopping, sawing, husking corn, etc., was painful. He was growing poor and emaciating. Physical examination of the chest revealed a little dulness on percussion over the upper parts of both lungs, and a harsh catchy respiration. I put this man upon eucalyptol, and watched the case for a year and more. The patient still complains at times of lameness in the thoracic parietes, but he now has less of the catchy respiration and none of the dulness on percussion.

Case 5.—Miss McLaren, aged 16. In February, 1890, I was called to see this girl. I found her in bed. She had a temperature of 102°, a pulse of 120, respiration 30, cough and expectoration. She had la grippe a few months before and had fallen into this state. Her respirations were harsh, tubular and catchy. I treated her symptomatically and put her upon cod-liver oil at once. After about a month she began to walk out, and then I gave her eucalyptol besides her cod-liver oil. She continued to improve for some months, when I permitted her to go from my care to Ohio, where she has since remained. When I first saw her, she was much emaciated, but now she weighs 150 pounds. The cough and expectoration have ceased, and she is now perfectly well. Several children in this family have already died of consumption, and I believe this girl had incipient phthisis. The only thing lacking in the evidence is the demonstrated presence of the tubercle bacilli. I made no search for them.

Case 6.—Mrs. Pulfrey, aged 34, visited me in February, 1890. She had been failing for some months. She complained of pain in her right lung. The percussion note was normal, but the respiratory murmur was catchy. I put her upon eucalyptol and Phillip's wheat phosphates. She soon began to revive in every way. The catchy respirations have ceased and the patient has nothing to remind her of her former condition except her feeble endurance.

Case 7.—Mr. Young, aged 27. In the latter part of 1889 this man was taken sick in Boston. He was treated for bronchitis, but finally had to go into a hospital. Here he heard the visiting physician, a college professor, say to a class of medical students: "We don't get hold of this case." After a few weeks' stay in the hospital he came to Michigan to accept the hospitalities of his brother. In February, 1890, I was called in to see him. I found him greatly emaciated, with a temperature of 101°, pulse about 90, respiration 28, and a violent cough, raising about a pint a day of frothy, bloody sputa, containing mucous, pus and blood. The sputa had a rank, gangrenous odor, and separated into two layers, one of fluid and one of foam. This was enough to make a diagnosis of gangrene of the lung. Physical exploration revealed a small area of flatness at the lower point of the right lung. The rest of the lung was a little super-resonant because of its doing compensatory work. On several occasions this patient had alarming hæmorrhages. I put him upon eucalyptol and cod-liver oil. He gradually improved under this treatment, and went to Canada to live upon his