vary. But both measurements are taken each time by the same man, skilled or not; and in the measurement for practical shortening he will use the same method, and make the same error that he made in measuring for real shortening, and it will not appear in the difference between the two. It is not unreasonable to expect a moderate amount of care to be taken in any such measurements.

Next and last, as to the practical accuracy of the method: It has been used by the writer and others for some weeks in a large number of cases of hip-joint disease in the Surgical Out-patient Department of the Children's Hospital, and afterward a very careful measurement has been taken independently with a fairly accurate goniometer, and the results have always coincided within one or two degrees.

A FATAL CASE OF PULMONARY BLOOD-EMBOLISM OCCURRING DURING LABOR WITH TWINS.¹

BY CHARLES M. GREEN, M.D.

ON May 31, 1887, I was requested by Dr. O. W. Doe to take charge of a pregnant patient of his during his absence in Europe. The previous history of the patient is irrelevant to this report, except that during her second pregnancy she suffered with varicose veins in both legs. At the time of my taking charge, the patient was supposedly about six months advanced in her third pregnancy: the predicted date of labor was September 6th, and Dr. Doe expected to attend her at that time. Just previous to his departure the Doctor's attention was called by the patient to a swelling of the labia majora accompanied by a painful sense of weight and distention: other than this her health was excellent. It was found that the veins of the vagina and labia majora were much enlarged and engorged, the latter being as large as a man's fist. The lady was kept in bed and a firm compress was adjusted so as to exert an even pressure over the labia. At the end of a week the swelling had greatly subsided and the labia were of nearly normal size: the patient was then allowed to be out of bed, although going over stairs was forbidden for a time, and she continued to wear a supporting compress.

During the month of July the patient continued very well and was accustomed to take an almost daily drive without discomfort and without visible ill-effects on the previously enlarged veins. It seemed to me, however, that she was unduly large for the supposed duration of her pregnancy, and I surmised that there was some error in her dates. On the 4th of August the patient sent for me, thinking that her labor was imminent, although she had had no true pains. Inspection showed the abdomen to be as large as ordinarily at full term, and careful palpation revealed an apparently quite large fetus in O. L. A. position. A second fetus was not then detected, owing, it seemed to me afterwards, to the fact that this fetus was the smaller and was lying in a right posterior position and thereby somewhat masked by its fellow. The os uteri was found to be the size of a half-dollar, and although there were as yet no perceptible pains, considering the size of the uterus and my previous surmise of error in dates (it being then just a month before

the predicted date), I fully expected the speedy advent of labor. After two days, however, labor had not appeared and the patient was up again, and apparently in her usual health.

I did not see the patient again until summoned to her death-bed, although I was in constant expectation of a summons, and although her husband called one evening in the *interim* to warn me of an expected summons that night. During all my observation of the patient nothing appeared in her condition to excite my apprehension. The varicose veins had so far subsided that I apprehended no danger of rupture during labor, and I expected a normal labor and convalescence.

About quarter-past two on the morning of August 17, the patient awoke and called her nurse: she complained of not feeling well and of difficult breathing; in fact she was soon obliged to sit up in order to breathe comfortably. Uterine contractions probably began before she awoke; and as the pains increased in severity, respiration gradually became more difficult.² I was called ten minutes past four and reached the patient at twenty minutes of five: she was sitting up in bed, with a hurried respiration, and evidently in the second stage of active labor. The face was pale, however, and not flushed as is usual in active second-stage labor: nevertheless, I did not then suspect the real cause of the rapid breathing, but attributed it to the apparent severity and rapidity of the labor-pains. As soon as I could properly disinfect my hands I made a hasty vaginal examination, the patient lying down for the purpose, and found a head already bulging the perineum. I hastily felt the mother's pulse and found it rather weak and rapid; I did not attempt to count it, as one hand was engaged in vaginal examination. In about two pains after my first examination a male infant, found afterwards to weigh 6½ pounds, was born, with occiput right posterior. As soon as I saw the child, I knew that there must be still another in the uterus, as it was too small to have caused so much abdominal enlargement as I had found on previous palpation, and as only the usual amount of liquor amnii had escaped.

But meanwhile the condition of the patient was alarming. Instead of a relief to her respiration by the birth of the child, as I had hoped and expected, the breathing was becoming more hurried: the patient declared that she could not breathe lying down. The pallor increased; the pulse became more rapid, and irregular. I did not auscult the heart, there was no time, but it was evidently laboring. Hypodermic stimulation with brandy and ether was immediately resorted to, and the husband was informed that it was a case of pulmonary embolism and that the issue was probably hopeless: there was obviously no time for procuring a consultation. I persisted in the administration of stimulants with some temporary benefit, until after fifteen or twenty minutes it was evident that all treatment was useless. I then turned and delivered the second fetus as the patient was breathing her last, just forty minutes from the time I entered the house. The patient remained conscious until within two or three minutes of her death.

The second fetus lay in O. L. A. position and was the one felt by me on palpation: it was a girl, weigh-

¹ Read before the Obstetrical Society of Boston, January 14, 1888.

² The husband subsequently told me that before sending for me he had noticed that the respiration was not natural and had wondered whether I could do anything about it when I came.

ing 7½ pounds, and was asphyxiated beyond resuscitation, although prolonged effort was made for that purpose. The first child cried soon after birth and has since thriven. It is quite probable that if I had performed version and extracted the second child immediately after the first one was born, its life would have been saved; but although it was soon evident that the case of the mother was hopeless, I thought it best to continue my efforts in her behalf, and I do not now regret having done so, as this condition is sometimes recovered from.

Although not confirmed by autopsy, the diagnosis of pulmonary embolism of blood-clot seems to be beyond question. Air embolism needs not to be considered, as the embolus evidently became lodged in a pulmonic vessel at about the beginning of labor, before the rupture of the foetal membranes. No antecedent disease of the heart had been suspected or known to exist, whereby vegetations could have formed on the valves and subsequently furnished the fatal embolus.

The source of the embolus will never be determined; but it seems most probable that it proceeded from a thrombus in some one of the pelvic veins. From the known condition of varicosity in the visible veins of the labia majora, it is fair to infer a like condition of at least some of the unseen veins in the pelvis. A sluggish current in some one of these tortuous and dilated vessels must have furnished the thrombus from which the embolus proceeded. It is probable that the embolus was a small one and that it lodged in one of the smaller branches of the pulmonary artery at about the time the patient was awakened by her initial pains of labor and the clinical history suggests a gradual growth of the clot by thrombosis, with extension towards, and perhaps reaching, the heart.

My suspicion of error in the dates, whereby labor was expected earlier than at the predicted time, was, in the light of subsequent events, groundless; as the unusual enlargement of the abdomen was explained by the presence of twins whose combined weight at birth was fourteen pounds. And the threatened labor at the eighth month was obviously the effort of a distended uterus to relieve itself of its contents.

REPORT ON PROGRESS IN THORACIC DISEASE.

BY F. C. SHATTUCK, M.D.

THE LOBAR ARRANGEMENT OF THE LESIONS OF PHTHISIS, AND ITS RELATION TO DIAGNOSIS AND PROGNOSIS.

As assistant physician to the Brompton Hospital, Dr. Fowler¹ has had ample opportunity for the clinical study of phthisis in all its stages and phases. In this paper he takes up a point which has, he thinks, not received the attention which it merits—the fact, namely, “that in its onward progress through the lungs, the disease, in the majority of cases, follows a distinct route, from which it is only turned aside by the introduction of some disturbing element”—a previous pleurisy, for instance. The primary focus is very rarely found at the extreme apex, but rather, just above the middle of the clavicle: thence the

¹ Practitioner, October, 1887, p. 285.

lesion tends to extend at first backwards, possibly from inhalation of the virus while the patient is lying down. It is certain that in early cases the signs are not infrequently less equivocal in the supra-spinous fossa than in front. The extension in front in the upper lobe is apt to be on a line about an inch and a half from the inner ends of the first three interspaces.

Infiltration of the lower lobe occurs at a very early period of the disease, and is first to be detected opposite the fifth dorsal spine, midway between the border of the scapula and the spinous processes—somewhat below the apex of the lower lobe. “The infiltration of the lower lobe at this spot in the early stage of phthisis is one of the most constant features in the pathological anatomy of the disease, and its recognition is a matter of much importance, as in doubtful cases it is almost positive proof of tuberculous disease of the lungs.” Extension thence is toward the posterior border of the lung and along the interlobar septum, a line which closely corresponds with the posterior border of the scapula when, with the elbow raised, the hand is placed on the spine of the opposite scapula.

The above-described line of march is not invariable, but is extremely common, especially in cases with slowly progressive disease. The writer thinks that it indicates extension by inhalation of the virus through the bronchi. When the disease spreads by means of the blood or lymph channels the course is more rapid, and extensive miliary deposit is more common.

SARCINA OF THE LUNG.

A long paper by Hauser² can be thus summarized: In connection with all sorts of diseases of the respiratory organs, but especially those associated with cavity formation, the air-passages frequently contain a species of sarcina which is essentially different from that found in the stomach or from any other known species of sarcina. This organism stands in no causative relation to these diseases, nor does it appear to influence their course in any way—in other words, it has no clinical importance.

PULSATING EMPYEMA.

Keppler³ has collected thirty-eight cases, including one of his own. In one or two points his results are at variance with those of Comby, whose paper, based on twenty-seven cases, was noticed in these reports (1884, I, p. 176). To quote from our previous notice: “To sum up, pulsating pleural effusions occur only on the left side, are always purulent, indicate hopeless compression of the lung, and are incurable.” Keppler's own case was serous, followed by recovery, and was right-sided, as was also one other reported case.

THE SURGICAL TREATMENT OF PULMONARY DISEASE.

Runeberg⁴ has collected and analyzed reported cases as far as possible. He laments that, partly from want of detail in the report of the cases, the value of some of his material is impaired.

Of ten cases of pulmonary abscess surgically treated, he throws out three as of uncertain diagnosis. Of the other seven cases, in four permanent improvement or complete recovery followed. The other three

² Deutsch. Archiv. für Klin. Med., 1887, Bd. 41, p. 127.

³ Deutsch. Archiv. für Klin. Med., 1887, Bd. 41, p. 220.

⁴ Deutsche Archiv. für Klin. Med., 1887, Bd. 41, p. 91.