gone through a hard attack of cholera without asphyxia.

The nearer the development of foetal life the less are the chances of its recovery; in the seventh lunar month every foetus may be considered lost, if delivery has to be accomplished by nature.

Pains invariably cease as soon as purging sets in; but, on the other hand, I found the foetus yet alive in a beginning state of collapse. The changes of the dead foetus in utero are the same—it macerates and decomposes. It is very hard to determine whether the liquor amnii will diminish during an attack of cholera. As far as I can remember, the quantity was the same in a case of Caesarean section, even greater. The question as to what destroys the foetus will be equally difficult to answer.

I dissected almost every foetus which was not decomposed, or saw it dissected. But one post-mortem resembles the other. I shall give here the post-mortem, and each one may form his own opinion. I confess that I first took what I saw for cholera, but now I have changed my opinion, because our greatest pathologists have seen the same, and in children where there was no cholera.

Opening the abdomen you will find the ileum rose colored, especially the upper part, the lower part with a greenish hue; the same with the duodenum, which color was still greener. About three and a half inches of the ileum were filled with a colorless, whitish, dead epithelium. The lower part of the ileum with same pale green tenacious mass, getting darker towards the duodenum. In cutting the upper part of the ileum, a watery fluid escaped with some white flocks; the membrane on the upper part rose-colored, the vessels strongly injected; the membrane of the stomach rose-colored, with some streaky ecchymoses. The contents of the stomach contained opaque-colored fluid, intermixed with white stripes.

Strong subpericardial ecchymoses of the heart, especially in the neighborhood of the coronary nerve. Thymus greatly studded with ecchymoses.

Subpleural hæmorrhage on the lungs; lungs without air, and the lower parts strongly filled with blood.

In the bronchii nothing resembling vernix caseosa; liver extremely pale and bloodless; spleen, nothing remarkable; kidneys, a strong line of demarcation between the cortical and medullary substance; the first a little yellow, the latter filled with blood of a dark blue red color.

Brain very soft, filled with blood.

Bladder—a small quantity of pale yellow urine.

It cannot be denied that the result is very similar to what we see in cholera dead in the adult, and it explains the view Güterbock took in saying the foetus dies with cholera.—*Chicago Medical Journal*.

EXTERNAL PRESSURE IN TEDIOUS AND POWERLESS LABOR.

By T. CURTIS SMITH, M.D., Middleport, Ohio.

In the *New York Medical Journal* for January, 1871, page 98, there is an article taken from the *Lancet* for October, 1870, treating upon this subject. It is a well written article, and claims to advocate a new practice in tedious and powerless labor. Its author, W. S. Playfair, M.D., of London, is, no doubt, a man of great professional ability. But is it really a new practice? Von Ritgen suggested it in 1856. Kristeller carried it into practice in 1867. Dr. Barnes, of London, also says: "This resource should not be lost sight of. In certain cases it may obviate the necessity of using the forceps, or it may stand in good stead when instruments are not at hand." Dr. Playfair publishes several cases in which it was effectual in expediting labor and avoiding the use of forceps. Particularly was it so in one case, where the uterine contractions were very feeble and ineffectual to expel the foetus.

The question of external pressure was brought up during a recent discussion on the use of obstetrical forceps, held in the Meigs and Mason Academy of Medicine, in this vicinity. Dr. C. R. Reed remarked that since he had read Dr. Playfair's article, he had used pressure with benefit in some tedious cases of labor. Dr. D. C. Rathburn stated that he had always used it, and was taught to do so in the lectures he listened to while a student, and had practised external pressure for twenty-five years. As for myself, I do not remember the time since I commenced attending obstetric cases that I did not use it. I was aware of no authority that recommended it directly, but it seemed so reasonable to make external pressure, that I did so without thinking or questioning whether I had authority for so doing, and without dreaming of its being a new or unusual practice. I am thus led to conclude that it has been often practised by others with as little thought about it as I had. We do many things not

recommended by authorities, simply because it is common sense to do them.

I claim nothing for myself. Von Ritgen suggested this procedure before I was a student of medicine, and deserves credit for making it public. I am sure that by external pressure, I have avoided the necessity of using the forceps in a few cases, and greatly expedited labor in others. In October, 1867, I attended a case of very tedious and difficult labor. It was one in which it would have been eminently proper to apply the forceps. Labor continued quite active for sixty hours. Evidences of exhaustion made their appearance while the head rested very lightly against the perineum. There was such a strong prejudice against instrumental delivery, that I had to forego my better judgment in the case, situated as I then was, where council was out of reach. I began external pressure, finally using all my strength. In two hours, by the aid of the increased power of the uterine contractions, the fetus was expelled, severely asphyxiated, but was resuscitated.

One other case, out of a large number, I will relate, leaving these two as examples. A lady was taken with labor about 10, P.M., but did not send for me until 4, A.M., next day. I found the contractions frequent and very distressing, with very slight expulsive power. The head was very slightly engaged. This state of things continued, with very slow advancement, till 10, A.M., after which there was no further progress, the pains becoming less frequent and more feeble. At 12, M., her strength was evidently failing rapidly. I sent for my forceps, but determined to use much greater external pressure, some having already been used. I now put on all my strength. During the second pain there was perceptible advancement, and with the fifth pain the head was expelled, after which there was no further trouble, and a good recovery was attained.

This method, however, will not always succeed. In three cases where I used it faithfully it failed, and the forceps were resorted to, safely delivering the mothers and saving the children without injury.

External pressure has the following advantages:—1st. It is perfectly safe in proper cases, properly used. 2d. It will not frighten the patient and friends, as instruments often do. 3d. It will often bring a tedious or powerless labor to a happy termination, when instruments are not within timely reach, or counsel not to be had, as is often the case in country practice. 4th. Where the pains are feeble, it excites more

powerful uterine contractions, and increases their frequency. 5th. In that state of the uterus denominated inertia, it will often stimulate the organ to sufficient contractions to effect natural delivery. 6th. It is more efficient and certain in producing uterine contractions than ergot, and a safer means. 7th. In cases where uterine contractions are very powerful for a long period, without effecting any advancement, external pressure will not only advance the head, but actually prevent rupture of the uterus, where liable to occur, the same as pressure against the extended perineum prevents rupture of that important structure.

The manner of the application is simple and easy. The hands are spread out over "the fundus and sides of the uterus," and even, steady pressure made during the time of each uterine contraction, in the direction of the axis of the superior strait. Much or little may be used, according to the effects produced by the pressure.

Some patients are too tender to allow very much pressure at first, but by continuing it lightly, they soon bear it without a murmur, especially if informed that it is shortening the term of their suffering, or that it is taking the place of instrumental delivery.

Like all other valuable remedies or means for relief, it can be used to produce much mischief, if too long continued, or too powerfully applied. The injuries liable to arise from the injudicious use of external pressure are:—1st. Metritis. 2d. Hemorrhage, by separating the placenta from the walls of the uterus. 3d. Peritonitis. 4th. Rupture of the perineum. 5th. Death of the fetus by causing too great compression of the brain. To produce any one of these would, in my opinion, require very violent and continued external pressure, yet it is easy to see how any of these accidents, or even several of them, might occur, from an abuse of this means, rather than a proper use of it. Judgment and discretion must, therefore, be used in its application.

I do not wish to be understood, in recommending this method, as condemning the forceps. On the contrary, I believe the obstetric forceps not only of inestimable value, but often a necessity, and that it is one of the safest instruments we possess in proper cases, when managed by skilful hands. Only an intolerable prejudice against them can lead to any other view. I only commend this as a means always available, and one that will often help us avoid instrumental delivery, where the consulting phy-

sician or friends possess an undue prejudice against the forceps, or where the instruments are not easily to be obtained. To that class of practitioners who possess a very silly and unwholesome prejudice against all obstetric instruments, especially the forceps, this may prove a boon, which they may possibly accept, to their own advantage and that of their patients.—*Kansas City Medical Journal*.

Medical and Surgical Journal.

BOSTON: THURSDAY, SEPTEMBER 28, 1871.

THE PHYSIOLOGICAL ACTION OF NITRITE OF AMYL.

OUR readers are already aware that the Warren Prize for 1871 was awarded to Dr. Horatio C. Wood, Jr., of Philadelphia, for a memoir of experimental researches on the above subject. The thesis is published in the July number of *The American Journal of the Medical Sciences*, and we have condensed from the elaborate investigations of Dr. Wood a brief abstract of the results at which he arrives. After a concise review of the researches of Richardson, Brunton and others in the same field, the author proceeds to analyze the series of forty-nine experiments which he made on animals. The conclusions of his study are as follows:—

Nitrite of amyl produces its characteristic constitutional effects by whatever channel it is introduced to the system, whether by inhalation or by injection. The most constant and prominent symptoms are rapid, deep respiration and progressive loss of muscular power. The *post-mortem* appearances, after fatal doses, are peculiar in only one respect—the arterial and venous blood is almost indistinguishable in color, the bluish tint being absent, and the blood generally assuming a brownish hue, somewhat like that of normal deoxygenated blood.

On the motor centres of the nervous system the nitrite of amyl produces marked impairment of activity, the conducting power of the nerves being greatly lessened, but not wholly destroyed; reflex excitability is also impaired, showing that the

motor ganglia of the spinal cord are affected. The agent is therefore designated as a powerful depressant of the motor system. In the sensory system there is also impairment of power, less marked and less rapidly developed than in the motor. Sensation is not abolished until near death, and consciousness is retained until the whole system is profoundly influenced. Since this effect on the sensory ganglia is so late and so secondary, nitrite of amyl cannot be considered a true anæsthetic.

In its effects on the circulation, the nitrite reduces the blood pressure by causing primarily a paralysis of the capillaries, and, secondarily, by a direct depressant action on the muscular structure of the heart, independently of any influence on the central nervous system.

Locally, the nitrite of amyl does not act as an irritant or escharotic, but it does progressively lower the vital actions of the parts to which it is applied, and if the action is prolonged it results in the absolute death of the tissue.

The *modus operandi* of the agent in the system is believed to depend on its power to check the processes of oxidation, and so to arrest metamorphosis of tissue. The blood-change before alluded to, the extraordinary power of lowering the temperature of warm-blooded animals and the marked diminution in the relative amount of carbonic acid exhaled after the administration of the nitrite, all point to this conclusion, as dependent at once on a chemical and a vital action; while, inferentially, the lessening of functional activity throughout the system, the progressive and gradual character of its local action on the tissues, and the relative effects on more or less highly organized tissues, as on muscle and nerve, point toward the same deduction.

THE STUDENTS' NUMBER.

WE repeat the notice—given in our last issue—that the next number of the JOURNAL will be devoted especially to the medical students; and will contain, in addition to the introductory address before the medical class of Harvard University, an account of the monster, known as the Ohio babies,