

To corroborate the statements already made, provided that figures carry any force with those who may believe otherwise, I will state that out of the number cases which fell into my hands—seventeen in all—I did not lose a single mother, although in opposition to this fact again, I must acknowledge the loss of all the children, but one. It is well known, however, that in cases of placenta prævia, the mortality is notoriously great—the mothers as one in three, and the children as one in two—yet with such a mortality among mothers, I lost none, whereas among the children, I lost all but one. In extenuation of this great mortality of children, among the cases I attended, I have this to offer, videlicet, that eight-tenths of all the cases had been in the hands of ignorant women or incompetent practitioners, for at least ten, and, in some instances, more than twenty hours, previous to my taking charge of them; and the loss of blood, in the majority of cases, was so excessive and prolonged, that it were folly to look for anything save an asphyxiated foetus, as the result of so reckless a mismanagement; and the greatest wonder to me is, not so much the loss of the children, but the good results which followed the mothers. In only one of the seventeen cases witnessed by me, could I hear the foetal heart distinctly and without a doubt, and that was case I of this report; and of every mother, although version was resorted to in every instance, none were lost, but all recovered, with nothing worse than phlegmasia dolens (in two only), as sequelæ. I attribute my success, in regard to the mothers, to my inviolable practice of delivering as soon as possible; and when ever this was intertered with, by a tense, rigid and unyielding os, a resort was had in every instance to immediate digital dilatation, the readiest as well as the most feasible and effective mode of dilation: and, although sometimes this procedure would appear slow, tedious and ineffectual, nevertheless I found that firm and persistent manipulations invariably succeeded in sufficient dilatation to admit of the hand, and thus, at the outset, secure safety from flooding. In one case only did I use the tampon (for the purpose of arresting hæmorrhage and aiding dilatation), and that one case proved too many to warrant a repetition of the same procedure, for I nearly lost my patient on account of its inadequacy and deception. Barnes' dilators were tried and discarded, on account of their impracticability and insufficiency, the difficulty of keeping them in position, in cases of placenta prævia, proving them as worthless in these instances, as they are useful in cases of normal cephalic labors.<sup>1</sup> In no case did I use the forceps, and that for the very good reason that I am emphatically opposed to the use of that most useful of obstetric aids, in any and all cases of head last deliveries. My reasons for excluding the forceps in these cases, when it is so universally recommended, by authors and teachers, is this—it is not only unnecessary, but unintelligent, as well as a wrongly applied force! The head, in my opinion, can be disengaged

<sup>1</sup> "I had one case in which the excessive action of the uterine contractions had violently detached and forced the secundines into the vagina, where I found them several hours afterwards, while the foetus was yet within the cavity of the uterus.

quicker, easier and safer, by the manipulations of the accoucheur, provided he is thoroughly versed in the mechanism and physiology of labor in breech presentation, than by the use of the forceps, even if wielded by the most dexterous manipulator; and to affirm with confidence that I can disengage any well proportioned head from a normal pelvis, by manual efforts alone (aided if necessary, by the nurse or any other person present, when supra-pubic pressure is necessary), in less time than it is possible to apply one blade of the forceps to the side of the child's head, is as free from "excessive egotism," as it is possible for an honest belief to be. In making this statement, I am fully aware that in all cases of head last deliveries, whether in natural cases or those artificially made, that the supreme moment of danger to the child is, when the head approaches the brim and becomes engaged in it, for it is about this time that the uterine forces lose their power of assisting the further expulsion of the child. As in normal breech cases, so in those artificially produced, whether from placenta prævia or other causes, it matters but little how long the labor has lasted thus far, if the hæmorrhage has been brought under subjection and fully controlled, provided of course the funis has been protected, by being placed where it will receive the least compression, and, provided also, that the shoulders have been promptly and completely rotated, so as to bring the bis-acromial diameter of the shoulders into the conjugate diameter of the pelvis, for by this movement we succeed in placing the head in the transverse diameter at the brim, in which position, even if extended, sufficient room will be found to bring it down and have it delivered with a rapidity and ease that will warrant its integrity and viability; and I believe the power necessary to accomplish all this, should be in the accoucheur's own well-instructed brain, and not in a dependence on his iron instrument, the obstetric forceps; for any other plan of procedure is not only unintelligent, but a wrongly applied force.

In conclusion, I again repeat, that in all cases of placenta prævia, especially if centrally implanted, provided that it is evident to the attending physician that the hæmorrhage is in alarming gushes, and about to overwhelm both mother and child, or that the hæmorrhage is such as not to yield without first emptying the uterus of its contents, immediate digital dilatation, perforation of the placenta, podalic version (and that too by introducing the hand into the womb), and rapid delivery, offers the quickest, easiest and safest mode of relief, in our opinion, of any yet suggested.

#### GASTRO-ENTEROTOMY FOR INTESTINAL OBSTRUCTION. TWO CASES—BOTH FATAL.

BY W. M. FUQUA, M.D., HOPKINSVILLE, KY., SEPT. 1, 1883.

In the summer of 1880, I visited a negro man on the premises of Mr. Campbell, in Trigg county, in consultation with Drs. Boyd, Edwards and Worthington, of LaFayette. He had suffered from ob-

structed intestine for about a week; was 35 or 40 years old, and in the main had good health. The patient presented the following condition: Tenderness and tympanitis over the whole abdomen, right side of abdomen most prominent and resonant; pulse 130; respiration 24; stercoraceous vomiting; skin cool, and tendency to collapse. Rectal examination revealed nothing. After a careful and thorough discussion, it was unanimously agreed to make an abdominal section, entertaining the idea that the patient labored under intussusception, looping of the intestine, or some other form of acute obstruction.

After administering chloroform, and drawing off the urine, the abdomen was laid open from the umbilicus to the pubes. The intestines, distended to their utmost, gushed out. The venules and arterioles distributed upon their surface were turgid with blood and plastic with lymph, and so thinned by the distribution that they were semi-transparent. This distension was somewhat relieved by piercing the gut with an aspirator needle. Now, after carefully examining the jejunum and ileum, no obstruction was found, except at a point within  $2\frac{1}{2}$  inches from the ilio-cæcal valve, and extending thereto. The large intestine was free from inflammation, except in the vicinity of the obstruction, and was empty. Here we had an organic stricture of the intestine, and its location was of such a character as to preclude resection. So distended was the intestine from its fluid and gaseous contents, that it was opened in two places, and nearly a gallon of fluid matter allowed to escape, after which the intestine was nicely sutured, and returned to the abdominal cavity, which was carefully sponged and dried. The abdomen was carefully sutured with silk, and supported by a wide flannel bandage. The question of artificial anus was not taken into consideration, because of the condition of the patient, who died soon after the wound had been dressed.

*Case Second.*—In June, 1881, I visited Mrs. M., in consultation with Dr. J. C. Whitlock, and Dr. Job Cooper. This lady had always been of good health, was about 36 years old, and the mother of several children. Occasionally she had light attacks of colic, from which she easily recovered, without applying to her physician. Some six or seven days prior to my visit she had one of these attacks, and not getting as prompt relief as usual, her husband sent for Dr. Cooper, and subsequently Dr. Whitlock. The gentlemen failing to remove the intestinal obstruction after using every legitimate means, requested me to come and make a laparotomy.

The patient presented the following condition: no action from the bowels for six days; great nausea and vomiting, and had cast up stercoraceous matter; was very restless, with occasional pain around the umbilicus; pulse 120—respiration 20; skin warm and perspiring, with a temperature of 102 F. The abdomen was very considerably swollen, intestinal resonance distinct over nearly the whole surface, rectal examination revealed nothing. Now, after carefully weighing every feature and symptom in this case, we unanimously agreed that nothing short of abdominal section, offered any hope of relief. Both

the patient and her husband, and children, were anxious the operation should be done. The preparations for the operation were carefully made, and no detail, however trifling, was omitted. The abdomen was carefully cleansed, as well as the sponges, instruments, and the hands of those who should assist, with carbolic acid solution. To Dr. Geo. Campbell, of this city, the chloroform was intrusted. After drawing off the urine, I opened the abdomen from the umbilicus to the pubis in the usual manner, and when the omentum was turned aside the small intestines gushed out together with a considerable quantity of red serum, and what remained of this fluid was carefully sponged out. The peritoneum was greatly inflamed, as well as the entire intestinal tract, and upon its surface patches of lymph were to be seen everywhere. The small intestines were greatly distended, partly by its fluid contents, and by gas. The intestine was pierced by a large aspirator needle. The gas was allowed to escape. After carefully tracing the whole intestinal tract, to our great surprise, no obstruction was found at any point of its course, and we learned to our chagrin and disappointment, that we had been deceived in our diagnosis, and that this case must be accounted for on the grounds of inflammatory action and paralysis, from over-distention. In order to more effectually relieve the over-distended gut, the intestine was carefully opened, and a gallon of highly offensive fluid, was allowed to escape. Now, after closing the intestine with the glove suture, and the abdomen sponged out and dried, the abdominal wound was accurately adjusted, and held in place by silk sutures, and, over which, a large compress wet in carbolic acid solution, was placed, and held in position by a wide flannel bandage. The shock in this case was fearful—the operation lasting 40 minutes, and it was several hours before reaction was established. After this was done the patient expressed herself as feeling better. Opium and calomel, directed in moderate doses every 3 hours, and belladonna in small doses every 4 hours, with compress wet with solution of carbolic acid, kept continuously over the abdomen. This lady survived the operation about 24 hours.

#### REMARKS.

I place on record these two fatal cases of gastro-enterotomy because they were fatal; secondly, that they resulted from the direct effects of acute inflammatory action, and not the remote effects, as from organized fibrinous exudation; thirdly, that our diagnosis was fallacious. In either of these cases, so soon as the peritoneal cavity was opened, and the extensive inflammation revealed, together with the red serum, the result of this grave action, there could be no doubt of the prognosis, whether the obstruction be relieved or not. The unavoidable gushing out of the bowels, their consequent exposure to the air for some time, and the subsequent enterotomy, was ample to account for the shock in both cases.

Further, it will be readily observed that diagnosis is of the first importance, which should be determined in the onset of the case, and if delayed many complications must arise which would preclude accu-

racy of diagnosis, and when doubt exists, an exploratory incision is warranted.

When a hernia is recognized, and taxis fails, we count it good surgery to release the incarceration, and all experience teaches the longer the delay the greater the danger. Unhappily, no taxis except in an indirect way, can be resorted to in concealed intestinal obstruction, and hence the greater necessity of prompt diagnosis and corresponding surgical action.

## MEDICAL PROGRESS.

**ACTION OF ALCOHOL ON THE HEART.**—The following is quoted from an article by Professor Martin, of John's Hopkins University, in the Maryland Medical Journal for September, 1883.

Although the physiological effects of alcohol manifest themselves in many directions, we can only hope to arrive at valid conclusions by taking up the questions one by one. Our own researches made on dogs have been confined to a quite limited field, viz., what is the direct and immediate action of alcohol upon the heart, both as to its rate of beat, and as to the work done by it in a given time. Chronic abuse of alcohol of course affects the heart; but our inquiry has hitherto been limited to the immediate action upon the heart of a moderate quantity of pure alcohol added to the blood flowing through it; the heart being put entirely out of control by extrinsic nerve centers, and isolated from all other organs but the lungs. In other words, our problem was. What is the immediate action, if any, exerted upon the heart by a single dose of ethylic alcohol?

As regards action upon the pulse-rate, our experiments confirm those of Zimmerberg and others, alcohol in doses not directly poisonous does not affect the rate of beat of the heart.

As to the influence of alcohol upon the work done by the isolated heart we have, however, obtained some results which we believe to be new.

Our method of experiment was as follows: A dog having been placed fully under the influence of morphia sub-cutaneously injected, its heart and lungs were isolated in the manner which I had the honor to describe to this Faculty two years ago.<sup>1</sup> The heart was then fed with defibrinated blood obtained by the previous bleeding of other dogs, and supplied to the superior vena cava, under a constant pressure from Mariotte bottles. These bottles were four in number; two of them arranged to contain and distribute blood containing no alcohol, and two of them blood containing alcohol. By stopcocks any bottle could at will be connected with the heart. At the commencement of the experiment the heart was fed with blood mixed with one-fourth its volume of 0.75 per cent. solution of sodium chloride in distilled water—2,000 cubic centimeters of blood mixed with 500 cubic centimeters of the salt solution. This blood, passing from right auricle to right ventricle, was sent through the lungs to the left heart,

and from the left ventricle was pumped out into a tube connected with the right carotid artery. The aorta was ligatured immediately beyond the origin of this vessel. The tube connected with the right carotid conveyed the blood to a height sufficient to maintain about an average arterial pressure, as measured by a mercury manometer connected with the root of the left carotid. The pen of this manometer recorded on the kymograph not only the average arterial pressure, but the pulse rate. Uniform and free artificial respiration was maintained by a water engine.

The mode of work was as follows: One of us took charge of the kymograph, and was also responsible for time signals. All being ready, the heart was placed in connection with a flask containing good blood and allowed to pump blood from this flask into another. Let us call the four flasks A, B, C, and D respectively. When flask A was empty and B filled, it was easy, by opening and closing the proper stopcocks, to supply the heart from B and let it pump into A, and so on, to and fro, with the good blood for a certain time. At short intervals the blood pumped out by the heart in a minute was collected separately and measured. As soon as it was found that this work was pretty constant, varying not more than 10 cubic centimeters in a minute, the good blood was shut off and the poisoned blood from C turned on; this was pumped into D and collected there. While this poisoned blood was circulating, the quantity pumped out by the heart was measured from minute to minute; then good blood again turned on, and the measuring continued. Any experiment in which the heart did not under these circumstances show marked recovery from the action of the alcohol was rejected, so as to avoid the risk of ascribing to the alcohol something which was possibly due to the independent death of the heart.

The general result of our experiments may be primarily stated as follows: *Blood containing one-eighth per cent. by volume of absolute alcohol has no immediate action on the isolated heart. Blood containing one-fourth per cent. by volume, that is two and a half parts per thousand of absolute alcohol, almost invariably remarkably diminishes within a minute the work done by the heart; blood containing one-half per cent. always diminishes it, and may even bring the amount pumped out by the left ventricle to so small a quantity that it is not sufficient to supply the coronary arteries; hence blood is drained off by them from the outflow tube and at last none is pumped out from its upper end at all.*

We may here point out that the dose of alcohol was not *a priori* a large one. A man weighing 150 lbs. contains about 11½ lbs. of blood; one quarter per cent. of this is 0.46 of an ounce, a quantity exceeded by that in a single ordinary drink of brandy, and some people take a good many such drinks in a day. Moreover, the alcoholized blood in our experiments could hardly have acted on the heart as it flowed through its cavities; it must almost certainly have acted on the heart after it flowed through the coronary arteries to the capillaries of the organ and came into close relation with its muscular and nervous

<sup>1</sup> Transactions of the Medical and Chirurgical Faculty of Maryland, 1882, p. 203.