These principles, advanced by the earlier writers, have been lately discussed in their fullest detail by Prof. Hering, with what appears a claim for originality. We cannot, however, see any important distinction between saying, as has been done repeatedly, that the two ciliary muscles cannot act independently, and saying that the two eyes, as far as the ciliary muscle is concerned, must be looked upon as a "single eye." (Binoc Sehen, p. 136).

ART. X.—*Venesection as one of the Means for the Arrest of Unavoidable Hemorrhage.* By C. C. F. GAY, M. D., Member of the Surgical Staff of the Buffalo General Hospital, Buffalo, N. Y.

NOTWITHSTANDING the laborious researches of the best medical thinkers of this and of the old world, it is claimed by many that no progress has been made during the last three decades in our knowledge of the means for averting fatal results from hemorrhage in placenta prævia. Although less has been accomplished than could be desired, the profession have a right to denounce as libellous this statement. Achievements in this department of our science, for obvious reasons, have been tardy of accomplishment, since it falls within the province of few medical men in general practice to treat more than a case or two of central implantation during their entire professional career. Many may have passed a lifetime without seeing a case, hence it is to those more favoured brethren who occupy public positions, that the general practitioner must look for light obtained from their more extended field of clinical observations. An observer, however limited may have been his opportunities, cannot be excused for withholding from the profession any theory, fact, or experience, of which he may be cognizant, however insignificant his own personal observations may appear to himself.

Pervaded by a sense of duty to others, and a desire to contribute something to our present knowledge, I assume the task of giving to the medical public the results of my own personal observations, based upon the management of five cases of unavoidable hemorrhage, four of which I saw in consultation, and one occurred in my own private practice. Three of them were cases of placenta prævia centralis, and two cases of placenta lateralis.

As an illustration of the tardiness of men to accept newly-discovered truths, to indorse medical innovations, and of the slow and deliberate strides by which the science of medicine has made its way to public esteem, I may state that it was not until the latter part of the seventeenth century the discovery was made that the placenta, in placental presentations, was

originally implanted by nature over the os uteri internum, and had not gravitated by its own weight to this position, as was believed by all observers up to this time. The idea that the placenta, in placental presentations, was opposed by nature to the os or near it, was first given to the world by Portal, and it was not until after more than four generations that Portal's idea was accepted as true. If it required a century for the profession to accept Portal's idea, may we not be hopeful and await with patience for the coming of that auspicious time when, by the united labours of the best minds in the profession, such advances shall be made in the science and art of midwifery that the parturient can be as confidently assured of safety during the perils of childbirth when the placenta presents as when the vertex does.

At this present time, if there be any one question relating to the management of the parturient more unsettled than another, it is that of the best course to be adopted in case of unavoidable hemorrhage. It is of the utmost importance, therefore, that some rule should be laid down to guide the practitioner in his hour of trial. It is a rule, and it should become an established law, never to penetrate by manual force the os, until it is dilatable or *completely dilated*. It ought also to be clearly understood that the os, in one case, when open to the diameter of an inch, is as completely dilated as another whose diameter should measure twice as much.

Sir James Y. Simpson, whose valuable labours and contributions to obstetrical science entitle him to the first position among his *confrères* as the best worker and thinker of his time, has attempted to demonstrate that the flooding proceeds from the placenta and not from the uterus. In this attempt he has, however, I think, signally failed; but acting upon the assumption that his theory was true, he proceeds to the very trying expedient of first removing the placenta. To accomplish this the law enunciated above is violated, because an early removal of the placenta for the arrest of uterine hemorrhage presupposes the forcible entrance of the hand to accomplish this object through a rigid os into and within the uterine cavity.

The theory upon which Sir James bases his rule of action being incorrect, his plan of procedure ought not to meet the approval of the profession. The most severe flooding I have ever witnessed occurred after the removal of the placenta, showing clearly the uterus to be the immediate source of hemorrhage, and not the placenta, as claimed by Dr. Simpson.

Dr. Robert Barnes, of London, believed he had cut the Gordian knot when he enunciated his new physiology of placenta prævia. He, having regard to the great necessity of observance of the law, never to force a rigid os, proposes to introduce, not the whole hand, but simply a finger, through the os while yet rigid, separating, so far as he could reach, the placenta from its placental attachments and zone of dangerous implanta-

tion, and thus convert an abnormal and dangerous labour into a natural and safe one. I have had experience in one case only wherein the plan recommended by Dr. Barnes was tried. This case is reported in detail in the *Buffalo Medical and Surgical Journal* for July, 1868. I proceeded after the plan proposed by Dr. B., to separate with my finger the placenta, which was centrally implanted from its attachments, as far up as I could reach, through an os sufficiently dilated to allow easy ingress of the fore finger. No less hemorrhage followed this manipulation, but I think there was more than before, though not a sufficient amount to make one at all anxious. After having waited for some time, the tampon which had been used was removed, and Dr. Hauenstien, who called me in consultation, introduced his hand, using some force, turned and delivered the woman of a stillborn child. This was followed by post-partum hemorrhage, of which the patient died in one hour and a half. Ergot was given immediately after the expulsion of the placenta.

The several plans suggested and advocated by Drs. Simpson and Barnes offer undoubtedly advantages in exceptional cases, but as a rule, we are constrained to believe that they cannot be accepted as the rule of practice; therefore, I again repeat, we must look elsewhere for agencies other than those of Drs. Simpson and Barnes before we can say that no more need be or can be said *pro* or *con*.

In an elaborate paper read before the Medical Society of the State of New York, by Dr. Isaac E. Taylor, and published in the transactions for 1865, are contained some most sensible remarks upon the treatment of placenta prævia, which should be treasured up by every medical man, on account of their intrinsic value; but I fail to see wherein Dr. T. has succeeded in demonstrating the unfolding of the cervix uteri as clearly as he claims. Dr. Taylor is undoubtedly correct in his observations that the cervix does not become obliterated until up to the full period of utero-gestation, or until the actual commencement of labour. This statement, however true, does not conflict in the least, as I understand the case, with the views of Dr. Barnes. Nowhere in his book, if I make one exception, can Dr. B. be understood as expressing any other opinion in regard to the relative position of the placenta and cervix than that it is opposed to the os internum and not to the os externum, as Dr. T. assumes. Dr. Taylor has, I think, misapprehended Dr. Barnes in this regard.

It appears to me, after a careful review of the different methods proposed by more recent writers for the control of unavoidable hemorrhage, that we are, after all, obliged to fall back, measurably, upon the teachings of the older authors, and to adopt their teachings with several modifications, to which attention will be presently called. It abates not one iota from the great merit of Sir James Y. Simpson, though his method may have been tried and found wanting; the genius evinced in its conception,

and the boldness manifested by the author in being the first to put it into execution, command the admiration of the profession.

The impression almost universally prevails, which leads to the great error in the proper management of unavoidable hemorrhage, that means must at once, without a moment's delay, be resorted to for the delivery of the parturient, without regard to the condition of the os uteri, hemorrhage alone affording a sufficient pretext for action and immediate interference. The lesson has seemingly many times to be learned, viz., to place more confidence in the actual powers and provisions of nature, and less reliance upon art. But to make confidence and trust available requires attributes in antagonism to those possessed by the timid. In times of emergency the man exhibits less calmness and temerity by precipitate haste than by withholding active interference until the opportune moment arrives.

In proposing to employ venesection as a remedy for the arrest of hemorrhage, the writer is well aware that he offers nothing new; but, nevertheless, by reason of the obloquy and oblivion to which venesection has long been consigned, it may be considered a proposition somewhat startling. Physicians are all agreed that venesection in disease has justly fallen into disrepute, because of the change of type of disease from the sthenic to the asthenic. We now give stimulants where we formerly bled, and it has become bad practice to deplete in pneumonia; but, though *disease* is a condition of asthenia and debility, I do not understand that *health* is not as sthenic and robust now as in the times of Louis. The condition of the parturient is not one of disease, but the simple performance of a physiological function; hence, if venesection were ever applicable as a derivative in uterine or any other hemorrhage, it is of equal adaptability and service now, and cannot be ruled out upon any such hypothesis as that mentioned above.

Venesection was once regarded as the sheet anchor of hope by many within the circle of my own professional acquaintance for epistaxis, hæmatemesis, hæmoptysis, etc. So radically changed now are the views of the best authors in this regard, that scarcely a person could be found sufficiently bold to employ bloodletting as a derivative, lest he might be ostracized for his daring.

It is my purpose to do what I can to rescue this powerful agent from unmerited neglect; to show wherein it may be made available in certain cases of unavoidable hemorrhage and to recommend its employment; for if the methods recommended by Simpson and Barnes be inoperative, as I think it demonstrable that they are, then it must be confessed that we are not in possession of adequate means, in all cases, for the arrest of uterine hemorrhage.

If we must make public this confession of professional weakness, then no amount of popular prejudice should consign an agent to utter neglect which gives any promise of usefulness where the emergency was great and

the remedies few. Unfortunately for my advocacy of venesection, I am able to bring forward only a single case in which it was employed, and this cannot be considered a test case, inasmuch as it was one of placenta prævia lateralis and not of central implantation, the danger, as every one knows, being much more imminent in the latter than the former.

CASE I.—In March, 1852, I was called to a case of labour which proved to be one of lateral presentation of the placenta. The patient was robust and plethoric, aged 27, mother of two children; former labours normal and easy; I found this woman sitting nearly in the upright position in a high seat, prepared for the purpose; she claimed it as her right to maintain this position; her pains were regular, but not vigorous; she had lost considerable blood during her pains, which commenced two hours previous to my visit. On examination, found os pretty well dilated and placenta presenting left laterally; gave ergot, and waited until I ascertained that at each pain the blood spirted freely from the uterus. This case of labour occurred at a time when bloodletting was used almost indiscriminately for numberless ailments. I decided to bleed at once, and abstracted from the arm *pleno rivo*, about eight ounces of blood, which to my surprise and gratification effectually and at once arrested the flooding, the pains immediately became active, and as the vertex presented normally, labour was soon completed by the efforts of nature, without any more loss of blood, the patient convalescing as rapidly as in her previous labours.

There never occurred any doubt in my own mind that, in this instance, the fearful flooding was controlled and arrested by venesection. Its rationale it is not my purpose now to discuss. I content myself in giving the facts.

Although not strictly within the scope of this paper to give cases in detail, I nevertheless can more clearly illustrate my views upon the applicability of venesection in cases of placenta prævia, by briefly reporting two cases of placenta centralis occurring in the practice of Dr. Hauenstien, of this city, by whom I was called in consultation, and with whom I was associated from beginning to the ending of the labour.

CASE II.—February 23d, 1868, was called in consultation with Dr. H. to visit Mrs. R., German, aged 38, multipara. One month prior to this visit the patient had been attacked with uterine hemorrhage, which Dr. H. arrested by the tampon. At our joint visit, this woman had attained to her full period of utero-gestation, and was flowing; labour pains slight. At next visit, 5 A. M., ascertained that considerable blood had been lost, and that there was no perceptible dilatation of the os. Introduced the air-ball tampon, and bandaged the abdomen tightly. We determined to delay active interference, provided our efforts to arrest hemorrhage with the air-ball should be crowned with success, until the complete dilatation of the os. As the air-ball appeared to be efficient for the arrest of hemorrhage, we did delay, and await the efforts of nature, even beyond the verge of apparent safety, until dilatation was completed. We had ascertained from external palpation that the position of the child was transverse, and by digital examination that the placenta was centrally implanted. Pains had been considerable in force at noon, but now, at 9 o'clock P. M.

have ceased; tampon now removed, os found fully dilated; entrance of the hand within the uterine cavity easily made, the patient having been previously anæsthetized, one foot seized, brought down, and when the breech became engaged, hemorrhage, which had been considerable after removal of tampon, was arrested, and the further delivery, as the pains had become active, was left to the unaided efforts of nature; she gave birth to a living child, and had herself a good recovery. I should add, that pressure was constantly made with both hands upon the abdomen and maintained for some time after delivery. The air-ball, it is believed, applied closely up against the os, greatly facilitates dilatation.

CASE III.—April 4th, 1868, was requested by her medical attendant, Dr. Hauuestieu, to visit Mrs. L., aged 40, mother of three children, youngest, nine years of age; hemorrhage first occurred either at 8 or 8½ months utero-gestation. At 9 P. M., April 3d, copious hemorrhage commenced. At 2 o'clock A. M., April 4th, labour pains began. The air-ball was promptly used, there being no dilatation, and the abdomen bandaged. I first visited the patient with Dr. H. at 1 P. M., at which time there was some hemorrhage in spite of the tampon; pains regular; pulse feeble, normal in frequency. Examination had previously been made and central implantation diagnosed; dilatation was sufficient to easily admit the forefinger. Advised continuance of treatment; 5 P. M., patient much in the same condition; advised waiting; 8½ P. M., no material change; general condition of patient the same as at last visit; labour progressing; removed tampon; dilatation of os about one-half completed; introduced air-ball again; applied bandage and left the patient, but was summoned in haste at 3½ A. M., April 5th. There had been some hemorrhage in spite of the tampon during the last hour. The position of the child was ascertained to be transverse, as in the former case. Removed air-ball and found the os dilatable; patient under the influence of chloroform; entrance of the hand was easily made through the os; within the uterine cavity, the child was turned, and delivered alive by Dr. H., with such assistance as I was able to render. At 11 A. M., April 5, no untoward symptoms, both mother and child doing well.

In the second reported case, it will be seen at a glance that the air-ball was all-sufficient to arrest hemorrhage, until the law of appropriate management, enunciated above, was complied with, viz.: non-interference, save the necessary means for the arrest of hemorrhage, until the *complete* dilatation of the os, hence venesection would not be thought of for one moment; but, in the third case, more or less blood escaped around the air-ball, and the os was a longer time dilating; it was rigid and undilatable. The cervix was undergoing the process of unfolding and obliteration, described by Dr. Taylor. Now, were it possible for general blood-letting to accomplish the twofold object of facilitating this process of expansion or dilatation, and of arresting hemorrhage, then the accumulative prejudice of twenty years against the employment of venesection should deter no one from its prompt, but cautious use, before there were any giving way or flagging of the vital powers.

I cannot assert positively, although I do believe, that in the last case,

venesection would have been borne, and that it would have greatly facilitated labour by more speedily dilating the os, preventing a protracted drizzling hemorrhage, and, to speak paradoxically, saving blood by losing blood. But I am prepared to go a step further, and claim more for venesection than its power to expand and unfold the cervix. I claim that it will, beyond a doubt, at least, in a majority of cases, arrest uterine hemorrhage. If it will do this in five cases out of ten, the woman is certainly entitled to its benefits.

One other thought should not be omitted here. There are those who will carp at the idea of the employment of venesection, and especially at the idea that it will produce any more influence in dilating the os than that of the blood already escaping locally from the uterus. I have never seen any evidence that this local flowing in the least facilitates expansion, while, on the other hand, are we not surrounded by a "cloud of witnesses," to testify to the power of venesection in overcoming a rigid os.

Barnes' dilators, in the hands of an expert, may work wonders by accomplishing the desired end; but I must acknowledge my skepticism in their utility, as well as applicability in the hands of the non-expert.

Dr. Elliot, of New York, however, has used and speaks well of them, and what he says should be received as reliable. No better authority need be sought for.

Finally, if every case of labour, so dangerous to both mother and child, terminated as happily as did these two reported cases, then there were no further need of expedients, but no assurance can be given that such termination can invariably be looked for. The air-ball was sufficient to completely arrest the flooding in one case, but not in the other. It is precisely at this critical juncture when the tampon seemed to be somewhat inefficient, so much so, at least, as to allow a greater escape of blood than in the one reported, that I would make venesection available. I have no difficulty in believing that the arrest of blood might be made complete by the abstraction of eight ounces of blood from the arm, provided always the patient had not lost already such an amount of blood as to have produced syncope, and I am clearly of the opinion that the physician would be justified in so acting, even though he did not accomplish the arrest of flooding with the lancet, for the chances in his favour for success against failure might be in the ratio of ten to one, and this certainly should be sufficient justification. Nor are we wanting in support of the sanction of the highest authority for our advocacy of bloodletting in unavoidable hemorrhage, authority which alone can be amenable to objection on the ground that it is not sufficiently modern; but, let me ask, were the older authors not our equals? Shall we cease to esteem their teachings? Are we so much more skilled, learned, and wise in our day and generation than they, that we must needs bury in oblivion the accumulated experience of the ages preceding us? Let us not be forgetful of the fact that the

woman in labour is not sick ; that she labours not under disease, asthenic in type ; that we are called to render assistance in the performance of a physiological act, or, if you please, to treat an accident ; that, if hemorrhage may be controlled, the membranes ruptured, and the vertex presents or the breech presents, the labour ceases to be one of danger, and becomes one of safety, both to mother and child. And let us also remember that she who confides in our skill, and places her life in our hands, has a right to demand the application of all the known and tried means which may promise the least hope for her safety and the happiness of her family.

ART. XI.—*Case of Amputation at the Hip-joint for Gunshot Fracture of the Head and Neck of the Femur.* By JOHN ASHHURST, Jr., M. D., Surgeon to the Episcopal Hospital, etc. (With an illustration.)

AMPUTATION at the hip-joint is in itself an operation which involves such serious consequences, that it is the surgeon's duty to report every case in which it is performed, no matter what the result of the case may have been.

E. B., an Irish woman, twenty-two years of age, on an afternoon in the month of August, 1867, was shot by her husband's brother, while she was standing with her child in her arms on the door-step of her own house. Seeing her assailant coming towards her with a loaded gun, and announcing his intention to kill both her and her child, and not being able to escape, she crouched in a stooping posture, so as to shield her infant, and received the contents of the gun in her right hip. The ball, which was of the ordinary conical shape, entered behind, near the fold of the buttock, and shattering the head and neck of the femur and the acetabulum, passed out at the groin, and grazed the leg of the child ; inflicting on the latter, however, a mere flesh wound, which soon healed.

The affair took place at or near Tacony, in this State, and the poor woman being carried into the house suffering from shock and loss of blood, was soon after seen by Dr. W. Scott Hendrie, under whose skilful care she remained until her admission to the Episcopal Hospital in the following December.

When she came under my care on January 1st of the present year (1868), her face, though still comely, bore evidence of the prolonged suffering to which she had been subjected. Her right lower extremity lay perfectly helpless and immovable, and was the constant seat of severe pain, which was greatly aggravated by pressure or by motion. One or two abscesses had formed in the neighborhood of the fracture, and the openings from these, as well as the original wounds, gave vent daily to a very large amount of pus. She had, besides, a large and painful bed-sore over the sacrum, and was, in addition, constantly subject to the recurrence of an exhausting diarrhœa.

Careful examination revealed the existence of such an extent of osseous lesion as nature could not be expected to cope with, and after repeated consultations with my colleagues, it was unanimously determined to re-