On secondary hemorrhage after parturition / by Alfred H. M'Clintock.

ON

SECONDARY HEMORRHAGE

AFTER PARTURITION.

BY

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SECONDARY HEMORRHAGE,

&c. &c.

THE uterine hemorrhage of pregnancy, and that which occurs within the first hour or two after delivery, are familiar to all accoucheurs, and their causes and treatment are described in every systematic treatise upon midwifery: not so, however, that species of uterine hemorrhage which forms the subject of this paper. It has received little notice, and from only a very few authors; yet it has many claims upon our attention. It is not unfrequent; it may prove dangerous or fatal; the causes that determine its production are various, and consequently the indications of treatment are less plain and simple than in the other kinds of flooding connected with pregnancy or childbirth. Moreover, the circumstances under which it occurs are gene-

rally such as to take the practitioner by surprise, and to create considerable alarm in the minds of the patient and her friends. Coming on, too, as it usually does, very unexpectedly, and at a time when all parties are perhaps beginning to indulge a feeling of satisfaction at her happy escape from the perils of childbirth, an attack of this kind is very much calculated to disturb their composure, and prove a source of great anxiety.

The object of this paper is to present, with some regard to order, and as concisely as possible, the results of my own experience and researches on this complication of the puerperal state. Although I can lay claim to no originality in the following remarks, still I am not without hope that good may be effected by bringing this subject under the notice of accoucheurs in a distinct but comprehensive manner.

It may be well to state, that by the term "Secondary Hemorrhage" I understand any profuse sanguineous discharge from the vagina, commencing after a patient has been six hours delivered, and within a month from this epoch[a]. The denomination "Menorrhagia lochialis" is employed very much in this sense by some writers, especially by Dr. Burns. I think, however, it should not be thus generically used, but should rather be restricted to the prolonged continuance of *red* lochial discharge; a sort of hemorrhage, it is true, but materially differing in its nature and treatment from that to which this paper relates.

For some days after mature delivery, the uterus freely permits the escape of blood, unless the conditions normally existing to provide against such an occurrence be strictly complied with. These conditions, upon which so much depends, are, the degree of contraction in the uterine fibres, and the state of

[a] This definition is in accordance with the rule laid down by Madame Lachappelle: "Après l'accouchement, le nom d'*hemorrhagie* doit être réservé à toute perte plus considérable que ne doivent être les lochies, et moins distante de l'état de couches que ne doit être le premier retour de l'évacuation menstruelle."—*Pratique des Accouchemens*, t. ii. p. 375.

the circulation. So nicely poised is the balance between these agencies, that a very slight disturbance may suffice to produce hemorrhage. If, for instance, the uterus relax, or be arrested in its contraction, or if the blood rush with unusual force into its vessels, under the influence of general vascular excitement, or from a local determination, or "molimen partiel," as Madame Lachapelle terms it, then, in any of these cases, the barriers to the escape of the vital fluid are overcome, and hemorrhage ensues. Hence also it follows, that a degree of contraction capable of resisting the escape of blood when the circulation is tranquil, may, in an opposite state of the vascular system, prove wholly inadequate[a]. "Hemorrhage and a well-contracted uterus," says Dr. Ingleby, "are by no means incompatible." The great facility with which blood escapes from the uterus, especially at this period, is the most prominent feature in its pathology, and ought never be forgotten. Three circumstances in the vascular structure of the organ undoubtedly conduce to give to it this peculiarity. One is the extraordinary size and number of the uterine veins, or sinuses, as they are very appropriately designated; the second is, the tendency of these to open by lateral foramina on the internal surface of the organ; and the third, the complete absence of valves in the venous system of the uterus.

I shall now proceed to enumerate the various *causes* that may give rise to secondary hemorrhage. They are very numerous.

I. Perhaps one of the most frequent is the presence of a portion of placenta in the uterus. This is generally the result of artificial removal of the after-birth, especially if the operator is incautious or timid; but it may happen in the most skilful hands, where the cause of detention has been morbid adhesion

[a] This fact, supported alike by reason and experience, is noticed by most practical writers. Dr. Gooch erroneously thought that hemorrhage coming on under these circumstances was "a peculiar form," and as such described it in an essay, for which he has been severely, but not unjustly, criticised.

of a very intimate nature. Before the writings of White, Osborne, and Joseph Clarke had effected a reformation in the mode of conducting the second stage of labour, and whilst practitioners were guided by precepts and rules now happily exploded, manual extraction of the placenta was a common occurrence, and, as a natural consequence, the complication we are now considering was not by any means so unfrequent as in the present day.

The occurrence of secondary hemorrhage is often regarded as a sort of *primâ facie* imputation upon the accoucheur in attendance, implying some mismanagement of the third stage of labour, or some want of prudence in the subsequent treatment. The prevalence of such an opinion may, perhaps, account for the silence of authors upon the subject. Without attempting to deny that this event is occasionally the result of ignorance or rashness, still no one can affirm that it is always so, no more than it could be said of convulsions, of ruptured uterus, or of any of the other casualties incident to labour. Secondary hemorrhage, then, may, and very commonly does arise without a shadow of blame being attributable to the attendant; and of this we shall furnish abundant evidence further on.

When, unfortunately, a piece of placenta is retained in the uterus, it seldom produces any untoward symptom before the third or fourth day. If it is not cast off by this time, a train of symptoms usually develope themselves, which, viewed in the aggregate, will admit of an easy interpretation. To give any minute or lengthened detail of them would be here out of place; I must only refer the reader to the works of Charles White, John Clarke, Ingleby, and John Ramsbotham, by all of whom they have been fully and very accurately described. The following quotation from the last-named author gives, in a small compass, a tolerably correct picture of the ordinary course of events in these cases:—"For the first day or two the patient suffers little other inconvenience than that which arises from the loss of blood, and the more frequent and the more violent

returns of the after-pains. The secretion of milk is occasionally established; but the act of suckling produces an increase of uterine pain. These temporary returns of pain at length terminate in uneasiness of a more settled and more permanent description, which insensibly increases in degree, until it assumes the character of a continued tenderness of the uterine tumour, which is temporarily increased by the pressure of the hand. The uterine tumour is generally found well contracted. After the lapse of a few days, the local uterine irritation is transferred to the system, which is evinced in the accession of rigor, restlessness, watchfulness, anxiety, and the future progress of febrile symptoms. The pulse becomes at first quickened, afterwards hurried; the skin is dry and hot, especially on the belly; the face, though generally pallid, appears occasionally flushed, as if under the influence of hectic fever; respiration is quickened, and soon becomes laboured; the head is attacked with pain, which is continually upon the increase, until it ends with delirium; (sometimes the pain in the head is described to be of the pulsatory kind, resembling the tick of a clock); the appearance of the tongue is variable; sometimes it is dry, white, and furred; at others, it is dry and red; the eye at first assumes a glossy, and afterwards a languid appearance; the stomach is nauseated, and rejects the fluids taken into it, which are quickly altered in appearance and taste; and if the secretion of milk has been established, it gradually declines, until at length it disappears."

I cannot agree with Baudelocque, nor with a recent French author, M. Jacquemier, that hemorrhage is the most common accompanying phenomenon and the source of greatest danger in retention of the placenta. What is most to be feared, I think, in these cases, is the supervention of uterine or crural phlebitis. At the same time I must observe, that there are numerous instances on record of a fatal termination having ensued from hemorrhage alone; many such are contained in the writings of Lamotte, Perfect, White, Ashwell, Ingleby, Lee, &c. The hemorrhage rarely comes on sooner than the

fourth or fifth day, and it may not do so until the second week, or even later: in fact, so long as a fragment of placenta remains in the uterine cavity, the patient can have no security against a recurrence of the sanguineous discharge. Its retention operates probably in more ways than one to produce this result. First, it may occasion a partial and temporary inertia of the uterine fibres; secondly, it may, by its bulk, mechanically prevent the due and sufficient contraction of these fibres; and thirdly, it may cause a greater or less determination of blood to the organ. The last two causes, perhaps, are generally the most operative; but still the other should not be entirely excluded from a share in the production of the flooding; and an admission of its influence may help to explain the intermitting character of the hemorrhagic attacks.

The period at which the decaying fragment of placenta may come away, and thus put an end to the recurring discharges of blood, is exceedingly variable. Sometimes it is deferred until the third week, or even later. Dr. Ingleby is of opinion, "that the retained portion may become so far identified with the lining membrane of the uterus as to render a distinct and perfect disunion impracticable." He recites a case where "the hemorrhage began on the third day after delivery, and, with the exception of a few short intermissions, continued during a period of five weeks, when it terminated in death. On inspecting the body, a tumour of rather florid colour, and the size of the largest walnut, was found firmly adherent to the sides of the fundus uteri, at its highest part; the lining membrane covered the greater portion of the mass, though not its centre, which was ragged, and vessels could be traced opening upon it."

In the following case there can be little doubt that the "hard substance" was a retained portion of the placenta, enveloped in coagulated blood. "I was sent for to a woman," says Chapman, "who was seized with a flooding at the end of six weeks after her delivery. When I came to make a proper

inquiry, I found the womb open enough to receive three fingers, and a hard substance bearing down. There was some pain, or rather an endeavour in nature to cast out this superfluous guest; but it was not of itself sufficient, and the woman must undoubtedly have flooded to death, without the assistance of the hand. By stretching out my fingers far asunder, I dilated the mouth of the womb much more than at first I found it, and then brought away a firm fleshy substance, in the form of a turkey's egg, and nearly of the same bigness. The woman was very weak, but by proper management she recovered." In the very next paragraph he informs us, that he "could give many instances of this kind;" so that he evidently did not regard it as a singular or uncommon case.

The following case I saw in the autumn of 1846, in consultation with a practitioner of this city. The patient, a stout healthy woman, was the wife of a butcher living in the neighbourhood of the Castle-market, and had been confined of her sixth child, seven days before my visit. The history I got was as follows: the child had presented with the feet, hemorrhage took place soon after its birth, and on introducing the hand for the placenta, this was found so intimately adherent to the uterus, as to render its removal difficult and incomplete, some portions remaining behind. She went on, however, most satisfactorily until the fifth day, when she had a sudden and profuse dash of hemorrhage, which recurred again and again at intervals. At the time of my visit (for I only saw her once), she was much blanched and nearly pulseless, but no discharge of blood was then going on. Late on the afternoon of the ninth day, there having been some loss in the interval, the hemorrhage broke out afresh with great violence, and before assistance could be obtained, she was a corpse. In this instance it is remarkable that the hemorrhage was the only untoward effect of the retention, no fever or local irritation having been induced by it. At the time of my seeing her she had a plentiful secretion of milk. I he-

sitate not to say, that this woman's life might have been saved by the timely use of the plug.

II. The retention of a coagulum of any size in the uterus, beyond the first few hours after delivery, is not apt to take place, as a very moderate degree of uterine action would be sufficient to expel it, or to prevent its formation. Should it occur, however,—and experience shows that it may,—there will be constant risk of hemorrhage so long as it remains in the uterine cavity. The immediate or exciting cause of the effusion in these cases is probably some accidental displacement of the clot, or excitement of the arterial system. A woman "had frequent discharges of blood from the uterus for the first *ten* days after delivery, until at length, the hemorrhage becoming profuse, and her strength much reduced, the hand was passed into the vagina, and the fingers introduced into the uterus, by which means some coagula were removed, and the discharge ceased."—(Collins.) A fatal case of secondary hemorrhage on the eighth day, apparently from retained clots, occurred in the practice of Madame Lachapelle. It was the patient's first accouchement, and she gave birth to twins. Immediately on the expulsion of the two-lobed placenta flooding took place in such excessive quantity, as to place her life in great danger for some hours. Notwithstanding this she progressed favourably until the eighth day, when, in attempting to get up, the hemorrhage recurred, and along with it there came away two fetid clots, which Madame Lachapelle considers were the cause of this fresh accession of bleeding. It was only by the liberal use of cold wet cloths, and injections of cold water, that the discharge was checked, but not before the vital powers had sustained a shock from which they could not recover. She died in the course of a few hours.

Dr. Burns remarks, that where the restoration of the uterus to the unimpregnated state does not go on regularly, "the cavity may be filled with blood, which forms a coagulum, and is expelled with fluid discharge. The womb," he continues,

" may remain thus stationary for a considerable time, and the coagula be successively expelled, with slight pains, and no small degree of hemorrhage. These symptoms very much resemble those produced by the retention of part of the placenta, and cannot easily be, with certainty, distinguished from them. We have, however, less of the fetid smell, and we never observe any shreds, or portion of the placenta, to be expelled, whilst the coagulum, if entire, has exactly the shape of the uterine cavity."

III. There are some considerations which favour the supposition that, on rare occasions, secondary hemorrhage is the consequence solely of relaxation of the uterine fibres. This is a point on which we can hardly hope to obtain direct evidence, and in the absence of such we must take collateral proof. Thus experience shows that, for several days after parturition, the uterus occasionally admits of distention to a great extent, and this too under a degree of force which cannot be considerable. Ashwell once found the uterus to measure twelve inches, in a patient who died of uterine hemorrhage on the eleventh day from her confinement. I myself have recorded a case, in which the uterus on the seventh day became distended from internal hemorrhage, so that the fundus reached midway between the pubis and umbilicus. Ingleby details an instance in which, so late as the nineteenth day after delivery, the womb was emptied of a large quantity of putrid blood. Dr. Collins narrates a case where the introduction of the hand into the uterus was practised on the fourth day after parturition, for the suppression of hemorrhage; and the late Dr. Hamilton, of Edinburgh, used to relate, in his lectures, a case of a woman who was seized, five hours after a natural labour, with flooding, in consequence of relaxation of the uterus, induced, as he believed, by the influence of tobacco, which she very imprudently had smoked.

From the numerous and strongly marked sympathies of the uterus, it is reasonable to conclude, that for some days, at all

events, after parturition there may be an interruption of its contractile function, through the influence of deep mental impressions, or certain bodily derangements. Thus Perfect tells us of a lady, who some weeks after delivery was seized with a violent flooding, caused, he says, "by waking in a hurry from a frightful dream." Though the cases may be very few in which secondary hemorrhage results from simple relaxation of the uterus, still it can barely admit of question, but that this is often an efficient co-operative cause in producing or keeping up the sanguineous flux. In the case I am about to quote from Dr. Collins' Report, it would almost seem that the outbreak of hemorrhage was solely due to uterine inertia. "This woman had considerable hemorrhage on the fourth day, which had continued, more or less, for three hours before we were called. The uterus was distended, but contracted under firm pressure, and the discharge subsided. In less than an hour it returned, when the hand was passed, some clots removed, and cold applied, which arrested the discharge; an opiate was then given. In seven hours she had a third attack, when the hand was again introduced, on which the uterus contracted; firm pressure was made over this organ, another opiate was given, when she fell asleep and had no return."

IV. In a very large proportion of the cases of secondary hemorrhage, it will be found, when we come to inquire into the cause of the attack, that the state of the circulation plays a more or less important part. This, indeed, must be apparent on the most superficial reflection. To a local or general disturbance of the vascular system may be referred all those instances of effusion brought on by premature exertion on the part of the patient, by the incautious use of stimulants, by agitation of mind, local determination of blood[a], or in fact by whatever tends to increase the force of the vital current.

[a] Among the out-patients of the Lying-in Hospital I have known secondary hemorrhage, brought on apparently by sexual intercourse too soon after delivery.

As we possess no means of measuring the degree of uterine contraction, so we can never tell beforehand what amount of vascular disturbance may be borne without the escape of blood from the uterine surface. Should the process of restoration in the uterus be interrupted, or not go on regularly, the vessels, which are still large, will be very apt to effuse their contents under any comparatively trivial excitement of the circulation. A knowledge of this fact points out an additional reason for enjoining strict rest and the horizontal position where the womb remains unusually large at a late period after delivery.

Cases of secondary hemorrhage arising from this cause are not very uncommon. I shall therefore give only one or two examples of it. The first is recorded by Dr. Ferguson, of New York. "The patient was twenty-four years of age, and had never borne children. Her labour was comparatively an easy one, of fifteen hours' duration, and no unusual symptoms presented themselves during her convalescence, till the day above mentioned (thirteenth). For three or four days previous she had left her bed during a good portion of the day, and as the presence of the binder was unpleasant to her, she had removed it without my direction or knowledge. On the morning of the thirteenth day I was suddenly called to see her, and found her very much prostrated from loss of blood. I learned from her that during three hours blood had been escaping from the vagina, but she had avoided communicating the fact to any one, in the hope that the hemorrhage would cease spontaneously. The exact quantity of blood could not be accurately ascertained; all the clothing in the immediate neighbourhood of the nates was saturated with blood, and large clots were lying below the vulva, from which I judged that the quantity lost was not far from two pints and a half. The discharge had continued to increase since its commencement, and when I saw her it was still escaping quite rapidly. Her countenance was pale and anxious, and her pulse at the wrist exceedingly weak and frequent, it being 110 per minute. Upon examination

over the hypogastric region, the uterus was distinctly felt considerably larger and softer than is usual at this period, a circumstance which I attributed partially to the early removal of the binder, and partially to the probable existence of an internal hemorrhage previous to the discharge of the blood from the vagina. Upon introducing a finger into the vagina, I found a clot lying in its cavity, and the os uteri sufficiently dilated to admit its extremity for a short distance. I immediately ordered a cold douche, followed by the application of a bladder of ice over the lower part of the abdomen, administered one drachm of the saturated tincture of ergot, and enjoined absolute quiet in the recumbent position, and cold drinks. The effect of these agents was to produce a moderate contraction of the uterus, though the discharge of blood was not very materially diminished, I now made a re-application of the binder, with a thick compress over the region of the uterus, as firmly as could be borne by the patient, and ordered the administration, every second hour, of the following pill:—Ergot of rye, three grains; acetate of lead, two grains; powdered opium, a fourth of a grain; and mucilage, a sufficiency." Under this treatment she gradually improved. On the evening of the following day it was deemed necessary to free the bowels; to accomplish which a cold water enema was used. Commenting on this case Dr. Ferguson observes: " In this instance I think the hemorrhage is fairly attributable to the early removal of the binder, accompanied by premature exertion on the part of the patient, causing a great excitement of the circulation."

Not many months ago a lady asked me to prescribe for her children's maid, who had been confined in the Lying-in-Hospital twelve days previously, and was attacked with profuse flooding, which recurred on three successive evenings. This was clearly brought on by over-exertion too soon after delivery, and was perfectly cured by rest and the administration of the ergot of rye. Her labour had been extremely rapid, but was followed by very considerable hemorrhage after the expulsion of the pla-

centa. Curious enough, the lady herself, a very slight, delicate person, was near losing her life by an attack of secondary hemorrhage, after a confinement which she had four years ago in Hampshire. The flooding occurred on the *first* day of her rising from bed, though it was the *tenth* from her accouchement. Just before the attack she had suckled the infant, and from the state of her nipples had been put to more than ordinary torture; feeling exhausted, the nurse gave her some brandy and gruel, whereupon a gush of blood took place from the vagina. This was at noon: twelve hours afterwards the hemorrhage recurred with greater violence, deluging all the bed-clothes, and even penetrating through the mattress, so as to form a pool on the floor. She had to give up nursing, and did not recover from the effects of this loss for many weeks.

V. Moreau mentions cases that occurred in his own practice, where secondary hemorrhage (in one patient eight days subsequently to labour) to an alarming extent seemed to be the result of obstinate confinement of the bowels, with great fæcal accumulation in the lower part of the large intestine. So indurated was the excrementitious mass that enemata were of no avail whatsoever, and he had to effect its removal by means of the handle of a spoon, "faisant l'office de curette," as he expresses it. As soon as this was accomplished the discharge of blood ceased. Cases of this kind are not likely to be met with here, in consequence of the very general practice of giving purgative medicines to women in childbed.

VI. Dr. Ayre, in his "Practical Observations on the Disorders of the Liver," assures us that he has known this form of uterine hemorrhage to have been produced by functional disorder of the liver, and to have been suppressed by the administration of calomel. "That the uterine hemorrhage," he writes, "thus occurring during the first two or three weeks after delivery, is generally a symptom only of this functional disturbance of the liver, has not, I believe, been hitherto suspected: that it is, however, to be so regarded I can venture to

pronounce, from repeated observations made upon the disorder, and upon the means that are most efficient for its removal. It is now some years since I was first struck with the power which calomel purges appeared to possess in relieving uterine hemorrhage, as met with in the women belonging to the Lying-in Charity, for whom they were prescribed, simply with a view to their purgative effects. At first I ascribed the effect of the purge in relieving the hemorrhage to the evacuation of morbid matters from the bowels; but further and more accurate observations of the colour and condition of the stools, of the course of the disorder, and effects of the remedy, convinced me that the mere removal of the fæculent matters from the intestinal canal, though a proper, was nevertheless only a subordinate object, and in cases of excessive uterine hemorrhage was utterly unavailing; for, independently of other considerations which militate against that conclusion, a uterine hemorrhage will often come on after the brisk operation of the purge, and even where a spontaneous diarrhœa has for some time existed; and it will cease under the use of calomel alone or combined with opium, when the effect is simply to change the morbid actions of the liver and other organs of digestion, and in that way correct the unhealthy condition of the stools, and abate the frequency of their discharge. The cause, in fact, consists in a sudden interruption of the secretory function of the liver, which gives rise, in an aggravated degree, to an abdominal venous congestion, in which the uterus may, perhaps, participate; and the indication of cure for the hemorrhage, as well as other symptoms, will be found to be answered fully by restoring the biliary secretion. And as the danger in all these cases is imminent, it is of the utmost importance to be prompt in the use of those means which are suited to this end." After pointing out the caution to be used in the administration of diffusible stimuli, and giving some other general directions, he continues: "Calomel is the medicine which must be mainly relied on, and it must be given in small but frequently renewed

doses, following them up by aperients, or combining them with minute doses of opium where a diarrhœa is present, and continuing them until some impression be made upon the complaint, even at the risk of slightly affecting the mouth. By such means, indeed, I have had the satisfaction to save several women, whose condition to the attendants appeared hopeless: and it is under the full experience and assurance of their efficiency that I venture thus in the most unqualified manner to recommend them."

These observations from so high an authority deserve attention. Without wishing to lessen their value as a simple record of experience, I may still be allowed to say that I feel a difficulty in understanding how any functional disorder of the liver could so affect the uterus as to induce flooding. There is no particular sympathy between the two organs, neither does any of the blood from the uterus enter the portal system. The calomel, if it aid at all in the suppression of the hemorrhage, would appear to do so chiefly in virtue of its purgative qualities. In Moreau's cases, on the contrary, a rational explanation may be given, to account for the discharge, as there exists a direct and well-marked sympathy between the womb and large intestine; witness, for example, the good effects of cathartics and enemata in labour; moreover, the anatomical disposition of the rectum and left iliac vein is such that any inordinate distention of the former might impede the return of blood from the uterus, and it must be borne in mind that these hemorrhages are chiefly venous. These objections to Dr. Ayre's opinions are founded solely on physiological considerations, and I put them forward merely as such, leaving it for future observers to determine whether his theory or his experience is entitled to more respect in this matter. On the other hand, we learn from Dr. Watson that Dr. Latham's experience has led him to trust much to mercury, given to the extent of inducing salivation, in obstinate epistaxis. The same author also states that Dr. Southey relies upon mercury "as almost a spe-

cific remedy for obstinate hemorrhage occurring under similar conditions, from whatever organ of the body it may proceed." These remarks to a certain extent corroborate the practice of Dr. Ayre; and it may be in virtue of this antihemorrhagic property of the mercury that it acted so beneficially in his cases of secondary hemorrhage. Dr. Ayre himself says that the calomel must frequently be administered so as "slightly to affect the mouth." These are facts of much significance, and justly claim our deepest attention.

The following case is given by Dr. Ayre: "A case of the most alarming kind fell under my care some months ago, along with my friends, Messrs. Saner and Sleight, gentlemen of considerable practice of this place. The hemorrhage came on about three weeks after delivery, and was most profuse; the complexion of the patient was sallow and death-like; the stools had the colour of coffee-grounds, and very fetid; the mind timid and highly excitable, and occasionally indistinct; she frequently fainted as she laid in bed, and impatiently demanded to be fanned, and to have cold drink. Our treatment was directed exclusively to the correction of the congestive state of the liver, by restoring the biliary secretion, and we gave calomel in small doses frequently renewed. The hemorrhage became inconsiderable, and the other symptoms were much less urgent after some doses of that medicine had been taken; but it was not until after two or three weeks had elapsed, and when the mouth had become slightly sore, that the biliary secretion was fully restored, and that the lady could be considered as convalescent."

VII. According to Dr. Bennett, "the most prominent of all the symptoms occasioned by the presence of inflammatory ulceration of the cervix, during the puerperal state and after abortion, is hemorrhage. Under ordinary circumstances the sanguinolent discharge which follows parturition soon becomes modified, and ceases in the course of a few days, being replaced by the ordinary lochial secretion. When there is ul-

ceration the flow of blood often continues, in greater or less quantity, for three, four, six, eight, or more weeks. The blood thus excreted may be pure, or it may be mixed with muco-pus. This hemorrhage generally resists the action of all the usual anti-hemorrhagic remedies, its continuance frequently producing excessive debility and anemia." He further remarks: "I have no hesitation in saying that when hemorrhage continues after parturition for weeks beyond the usual time, there will *nearly always* be found some inflammatory and ulcerative lesion of the cervix, and that an instrumental examination is indispensable. Once the real nature of the disease is ascertained, the hemorrhage may, generally speaking, be immediately stopped by the cauterization of the ulcerated surface, from which it seems in these cases principally to proceed."

These truly practical observations would appear less applicable to secondary hemorrhage, properly so called, than to those cases of profuse or long-continued lochial discharge to which alone the term "menorrhagia lochialis" should, I think, be restricted. But, even with the utmost latitude in the interpretation of the cases here spoken of, there may still perhaps be some allowance made for exaggeration as to their frequency. Dr. Bennett himself tells us that "inflammatory ulceration of the cervix uteri during pregnancy is of frequent occurrence," which can hardly be said of lochial menorrhagia. As, however, I have seldom deemed it necessary to use the speculum in the latter months of gestation, or during the puerperal state, I cannot offer any positive opinion derived from my own experience in this matter; though I have strong reason to believe that many patients affected with chronic inflammation and ulceration of the os uteri have been delivered under my care, who, nevertheless, had no subsequent attack of hemorrhage or extraordinary amount of lochial discharge.

It occasionally happens, especially in first labours, that the os uteri is slightly fissured by the passage of the child. Now it seems not unlikely that this tear might put on an ulcerous

character, and prove the source of hemorrhage during the puerperal state, under any disturbance of the uterine circulation. This remark I put forward more in the way of a suggestion than as an ascertained fact.

VIII. Secondary hemorrhage has on many occasions been caused by the presence of a polypus attached to the uterus. That a growth of this kind should be capable of producing such a result is intelligible enough. There is a fact, however, of great importance, relating to these cases, which we might not be just so well prepared for, namely, that the polypus may for the first time give evidence of its existence soon after delivery. Denman makes allusion to this, and Dr. Montgomery, in a paper read before the Obstetrical Society, and subsequently published in this Journal, expressly states, "that a polypus, even of large size, may make its appearance for the first time immediately after delivery, no suspicion having been previously entertained of its existence." Cases of polypus complicating parturition, or first appearing after delivery, in the way just mentioned, are recorded by Van Doeveren, Pugh, Smellie, Denman, Fordham, Chaussier, Lee, Ferguson, John Ramsbotham, Francis Ramsbotham, Macfarlane, Merriman, Gooch, Levret, Deguise, Boivin and Duges, Dubois, Ingleby, Crisp, Radford, Davis, Jacquemier, Beatty, Churchill, Montgomery, and many others whose names it would be superfluous to mention.

In the class of cases I am at present considering, the production of the hemorrhage has been ascribed to the polypus impeding the due and perfect contraction of the uterine fibres. But, Dr. Oldham combats this notion, and very shrewdly observes: "This explanation does not accord with the fact of the hard and contracted state of the uterus as felt above the pubis, and with the cessation of the bleeding when the tumour is tied, although left in the womb exerting the same mechanical action as before. It would obviously be superfluous to treat a polypus of this kind by ligature only, leaving the same absolute bulk of growth within the womb, if the bleeding was invariably and

solely caused in this way." Dr. Churchill has published two very interesting cases where profuse flooding after delivery was apparently referable to the presence of a polypoid growth. In one of them the hemorrhage commenced with the birth of the child, and only ended with the life of the patient fifteen hours afterwards. In the other case, of which I give an abstract, the hemorrhage did not begin until some time after delivery. A strong, healthy woman was confined of her second child after a short and easy labour. Fourteen days subsequently she was attacked with excessive hemorrhage, which occurred three or four times in the space of a few days, reducing her vital powers to a very low ebb. On examination per vaginam a smooth, round tumour was found just protruding through the open os uteri. It felt soft and spongy, and the finger could be passed round it, but not sufficiently high to ascertain its insertion. Its size appeared to be about that of the larger end of a hen's egg. Under the use of the plug and other means the discharge ceased, and the uterus, gradually contracting, enclosed the polypus, so that it could no longer be felt, and the os uteri resumed its natural state.

Dr. Hamilton "witnessed upon one occasion a case of fatal uterine hemorrhage three weeks after delivery, where the only apparent cause was a polypous excrescence, not larger than a horse bean, situated upon the internal posterior surface of the uterus, about three inches above the orifice." Dr. Johnson was once present at the *post mortem* examination of a woman who had died of flooding after parturition, and in the uterus was found a large polypus, growing by so slender a pedicle that the slightest twist might have severed it, and thus perhaps have saved the patient's life. The following history was communicated to Dr. Oldham by Dr. Radford: "I was requested by Dr. ——— to visit Mrs. H., residing about seven miles from Manchester, whom he had attended for some days, with a general practitioner of the highest respectability. She had been delivered a fortnight, after a natural labour. The dis-

charge afterwards became more profuse, and continued during the above-mentioned period, and frequently occurred in gushes. Paroxysms of violent uterine pains, attended by bearing-down sensations, greatly harassed her. The attentions of Mr. ——— were unremitting, and he always found the uterus contracted. His treatment was directed to mitigate constitutional symptoms, and subdue local pain, and also to maintain and support the tonic contraction of the uterus.

"No benefit was derived from the various remedies he made use of, but the vital powers continued to decline, and when I saw her I found her *in articulo mortis;* indeed she died in two or three hours afterwards." At the *post mortem* examination there existed "no appreciable disease in any other organ except the uterus, in which was found a polypus of an oblong shape, about two inches in length, and attached to the anterior part of the body; its depending part was two inches in circumference, and its upper or neck about an inch and a half. That portion of the uterus in the vicinity of its connexion was dragged downwards and inwards." It is almost superfluous to remark that in cases of this kind nothing short of a vaginal examination can reveal the true cause of the hemorrhage.

IX. Inversion of the uterus has long been recognised as a cause of hemorrhage *post partum*. "I feel strong reasons," says Mr. Crosse, "for believing, as has been repeatedly stated by authors of high reputation and great experience, besides those already quoted, that partial inversion exists more often than is generally suspected, and is the cause of hemorrhage after the delivery of the after-birth." The loss so produced ordinarily takes place immediately upon the removal of the placenta, this being almost invariably the time at which the displacement occurs; but it may be repeated at uncertain intervals subsequently, if the malposition be not rectified. Thus Mr. Crosse observes: "The hemorrhage may continue for hours, or first show itself in a considerable degree when several hours,

or even a day or two, have elapsed." Cases are not wanting which sufficiently prove that the inversion may escape detection at its first occurrence, the accompanying symptoms not being decidedly marked. Professor Desormeaux reports, that "he was consulted for the case of a woman in whom there was an incomplete inversion which was not detected until twenty-one days after the child-birth." Dr. Meigs adds: "I have seen a case in this city in which the occurrence was not verified until thirty days after labour, and another in which eighteen months elapsed before the fact was ascertained." Dailliez mentions a case where the displacement was first discovered six months after it happened; Mauriceau, one at eight months; and two so late as at nine months fell under the knowledge of the late Dr. Ingleby.

Again it is supposed that the womb may spontaneously become inverted some days after parturition. On this point M. Colombat writes: "Notwithstanding inversion of the womb would appear, in a manner, to be impossible subsequent to the escape of the fœtus from its cavity, which is the period when the viscus is most expanded and most flexible, both Ané and Baudelocque bear witness to its having occurred upon the third day, and Le Blanc on the tenth day after delivery." This is an occurrence of extreme rarity. In fact the bare possibility of its happening, except as the effect of a polypus, would seem to be scarcely admissible; nor do I think the explanation offered by Dr. Burns much more satisfactory. He supposes that a partial displacement had in every instance previously existed, the change from which into a complete inversion occasioned the sudden development of symptoms leading to the discovery of the true state of the womb. Without entering further into these disputed points, suffice it for our present purpose to know that partial or complete inversion of the uterus is one, however uncommon, of the many causes of secondary hemorrhage; and that a knowledge of this fact furnishes us with an additional reason for instituting a vaginal examination in all these cases.

I have now recited, though very imperfectly I fear, what may be considered as the ordinary causes of secondary hemorrhage after parturition. In the category may be included an immense majority of all the examples of this accident which occur. Here, however, as in every other field of medical observation, anomalous cases occasionally come before us, which cannot be reduced to any kind of order or systematic arrangement. Some of these heterogeneous cases I shall now relate, and though it may fall to the lot of few to witness similar instances, still they should not on this account be passed over unnoticed. Viewed simply as curiosities of medical experience, they will be read with interest; and as objects of pathological inquiry they become invested with real importance. The following collection of cases might, doubtless, be considerably augmented; but this would have required a closer and more extensive research than I was able to make throughout the records of midwifery.

For the following history I am indebted to the kindness of my esteemed friend, Dr. Churchill, who was called into consultation in the course of the case. A lady had been safely delivered, under the care of Mr. Speedy, of a living child, after a natural and easy labour, without more discharge than ordinary. She recovered apparently, so that her attendant discontinued his visits; but about three weeks or a month after her confinement she was attacked with uterine hemorrhage to a considerable amount, which returned in less quantity, and continued, with occasional intervals of a day or two, until her death, which took place about a month afterwards. On examination all the organs were found to be healthy, except the uterus. At its fundus there existed a vascular growth, like an erectile tumour and about the size of a hen's egg, projecting into the cavity, and occupying the thickness of the uterine parietes in this situation. It was spongy, soft, and could not be enucleated. The entire uterine substance was displaced or absorbed at that part.

A case in many respects similar to this, and one too of sc-

condary hemorrhage, is recorded by Professor Kilian of Bonn. I shall give it as translated in the British and Foreign Medical Review: "A. B., twenty-four years old, strong and well made, was admitted, in an advanced stage of pregnancy, into the lying-in hospital at Bonn. She was then extremely healthy, and did not remember to have ever suffered from illness. The menses made their first appearance in her fourteenth year, and afterwards regularly every three weeks. She had menstruated once during her pregnancy. At the expiration of her time she was delivered of a boy. Half an hour after delivery the placenta came away, almost without assistance. At that time she was so well that her medical attendant joked her on a presentiment of the fatal termination of her accouchement, which she had frequently manifested, and which she, notwithstanding, still continued to nourish. The first three days subsequent to her delivery passed off without any symptom of disease. The secretions were healthy and the general state of the patient highly satisfactory; but, during the afternoon of the fourth day, Dr. Kilian was sent for in great haste to see the patient, who was described to be swimming in her blood.

"About two o'clock, whilst suckling her infant, she had exclaimed that she felt something boiling hot flowing between her legs, and immediately fainted. Before the nurse and house surgeon could come to her assistance, the hemorrhage had ceased. When Dr. Kilian arrived she had in a great measure recovered from the fainting fit into which the sudden loss of two pounds and a half of blood had thrown her. He proceeded to an examination both externally and per vaginam. He found the uterus properly contracted, uniformly firm, and free from pain on pressure. The os uteri presented no coagulum, and was not more open than usual four days after delivery. Dr. Kilian was perfectly ignorant, and had indeed not the most distant suspicion of the cause of the hemorrhage; for he had already carefully ascertained that the entire placenta had come away. Under these circumstances all that could be prescribed were

general preventive measures; such as the horizontal posture, repose, and cold applications to the external parts of generation," &c. The patient continued gradually gathering strength till the 7th of February, when she was visited by a precisely similar attack of flooding, which recurred on the 13th, and again on the 26th, each time the loss being very sudden and profuse. After this last attack she remained very much debilitated, and exhibiting the greatest despondency. The circulation was rapid, and the respiration correspondingly affected. On the 3rd of March, during the visit of the physician, there was a renewal of the hemorrhage, which ended in convulsions and death. "At the post mortem examination, all the viscera were found in a normal condition, except the uterus, and a cursory inspection of that did not betray its disease. It was pale, contracted, and firm; but on its front surface was observed a circular spot, rather larger than a half-crown piece, of a pale red colour, and less firm than the rest. An incision was made in the uterus posteriorly, and on its internal surface was discovered a tumour, corresponding to the above-mentioned spot, two inches long, and one and a half broad, of which the covering membrane hung down into the cavity of the uterus, and thus facilitated the inspection of its internal structure. This was extremely vascular; on looking into it, the open mouths of the innumerable vessels were easily discernible by the naked eye. Around the tumour the substance of the uterus was rather softer than elsewhere, and the numerous vessels leading towards it formed a concentric network"[a].

[a] A case resembling this in its pathological features is narrated by Dr. Carswell. A lady, aged 45, died from the effects of uterine hemorrhage, to attacks of which she had been subject for some years. "The only morbid appearance found consisted in a round, flat tumour, nearly three inches in breadth and half an inch in thickness, situated at the fundus uteri, and projecting into the cavity of the organ in the form of a mushroom. It appeared at first sight to form part of a large fibrous tumour situated posterior to it, and contained in the substance of the uterus. It was, however, a distinct tumour, the central portion of its posterior surface being but slightly

The following case, extracted from Dr. Collins' invaluable record, is a very remarkable example of secondary hemorrhage in consequence, apparently, of a laceration sustained by the uterus during labour. A woman, "on the fifth day after delivery, without any apparent cause, was seized with violent hemorrhage. When we saw her, which was immediately after, no pulse could be felt; and, though most prompt and active measures were employed, she died in less than an hour. She had been delivered, by the natural efforts, of a living child (her fifth), after a labour, not very severe, of forty-eight hours; nor from that time was there distress of any kind perceptible. On dissection the abdominal viscera appeared healthy, as did the uterus at first sight; but on raising it out of the pelvis, about the size of a shilling of its muscular substance, corresponding to the projection of the sacrum, was found to have given way, the peritoneal covering remaining uninjured. There were two spots in the vagina approaching to a state of slough."

Perhaps in this history the data do not warrant us in concluding that the loss of blood proceeded from the laceration of the uterine structure. That such might have taken place, however, cannot admit of question. The same may be said of the following case, which occurred in the practice of Smellie. Having stated that, in consequence of flooding, he deemed it necessary to deliver the patient by turning the child, he continues: "Unluckily, when stretching the os uteri, which felt thin and rigid, like a piece of parchment, the woman shrunk from the side of the bed, which obliged me to dilate with more

attached to the mucous membrane, and was composed of a cellulo-vascular tissue, with here and there small cavities filled with a yellow-coloured serosity, or a fluid resembling chocolate. The free surface was covered by a smooth membrane, presented a mottled aspect of grey, blue, red, and yellow, and was traversed by numerous varicose vessels, some of which were pretty large. From these vessels, I believe, the hemorrhage proceeded; and it is probable that the periodical character of the discharge, and the frequency of its recurrence, depended on the erectile nature of the tumour."—*Pathological Anatomy*, fasciculus 10, plate iv. fig. 2

force than I intended, to get my hand into the uterus; at which instant I felt the mouth of the womb give way, and tear at the side, so as to allow my hand to pass without further difficulty. The flooding diminished after delivery, on giving her fifteen drops of the *tinctura thebaica*, but returned in two hours, and ceased again on repeating the same medicine. She slept pretty well all night, was next morning much recruited by the refreshing rest and nourishing diet, but soon after was attacked with a violent hemorrhage from the vagina, by which she was in great danger of expiring immediately. This was checked by introducing into the vagina a sponge dipped in a solution of alum. To me it seemed probable that this flooding might proceed from some of the large vessels being torn that enter at the side of the uterus. She was long weak, but by the assistance of the *cortex Peruvianus*, and a nourishing diet, recovered."

Madame Lachapelle narrates two or three cases of hemorrhage supervening some hours after delivery, in consequence of slight lacerations at the vulva. In one instance, where cold wet cloths, and even cold injections into the vagina, had quite failed to restrain the discharge, she discovered the source of the hemorrhage to be a tear in the left nympha. By applying a piece of agaric to this, and confining it there with a plug or pad of charpie, the bleeding was effectually subdued. She gives two other examples of this kind, but the hemorrhage in them took place during or immediately after labour. A similar result I have seen produced by the rending of a cicatrix in the vagina during the expulsion of the fœtus. The bursting of a thrombus, or "bloody tumour" of the labium, may also be the cause of very smart hemorrhage some hours after delivery.

A very interesting and singular case of secondary hemorrhage is recorded by Baudelocque, in the third volume of his System of Midwifery: "A woman, whose pelvis had but two inches eight lines in the diameter of its entrance, having suffered no extraordinary accidents in the first eight or ten days of her lying-in, though the labour had been exceedingly la-

borious, on the twenty-second was seized with a considerable flooding, being then walking in her chamber; but this flooding, which lasted but an instant, did not hinder her from getting up the next and the following days, till the thirteenth, when she sank under a fresh hemorrhage, which lasted no longer than the former. On opening the body we found a purulent collection in the cellular substance which surrounds the right psoas muscle, and a considerable varicose sac, lined with sanguine concretions, which had opened with the abscess at the superior part of the vagina, a little anteriorly. The uterus was small, compact, and shut, and contained not a drop of blood within." In this relation the account of the necroscopic appearances is very deficient, and leaves us in ignorance upon many points of importance. The nature of the connexion between the abscess and "varicose sac" is not explained; neither are we informed what vessel this sac originated from, nor even whether it was from a vein or an artery, though the former may be presumed from his using the epithet "varicose."

At a meeting of the Dublin Obstetrical Society, Dr. Sibthorpe related the history of a remarkable case in which death occurred about three weeks after delivery, as the result of uncontrollable hemorrhage from the vagina. At the time of its occurrence there was no reason for supposing that this flux of blood did not issue from the uterus; but the post mortem examination (at which I assisted) led to a very different conclusion. The womb was found well contracted, of the natural size, and without any trace of blood in its interior. A large coagulum existed in the vagina. Some sloughing of this canal had been going on, and had extended through its substance at the left side, corresponding in situation to the descending ramus of the pubis: and it was conjectured that the coats of some vessel, a branch, probably, of the internal pudic artery, had been destroyed, whereby the hemorrhage was produced. At all events no other source for it could be discovered. As this

woman was in a weak, exhausted state at the time, having had a very difficult labour, the actual amount of loss which she sustained was by no means great.

In the present Number of this Journal my friend Dr. Johnston gives the details of a very singular, if not unique case, in which, five days after parturition, fatal hemorrhage took place, from what appeared to be a varicose aneurism in the substance of the uterus.

In discussing the treatment of secondary hemorrhage, I shall, so far as it may be found convenient, follow the same order as that in which its causes have been described. It is not to be expected that in every case coming before us we shall be able to discover the exact cause of the effusion, no more than can be done in every case of hematemesis, or of hemoptysis. But this very circumstance, the absence of any obvious or assignable cause, is, *per se*, a sort of evidence, and simplifies, in some degree, the treatment. In all examples of this kind we must only be guided by the following general principles, viz.: to tranquillize the circulation, both local and general; to promote the condensation of the uterine structure; and to use such constitutional and local remedies as may tend to favour coagulation at the mouths of the vessels. It may occasionally happen, even where we know what the exciting cause has been, and are fully alive to the importance of its removal, that this may be a matter of only secondary consideration, the first object being to relieve the present urgent symptom, in fact to stay the effusion; having effected this we can devise at leisure the best means of obviating the conditions which have led to the outbreak of hemorrhage.

In fulfilling the first and second of the above indications of treatment, the means to be employed are sufficiently obvious. Perfect rest in the horizontal position is to be strictly enjoined, and stimuli of every kind rigidly withheld; the patient must lie on a hard bed in which her hips cannot sink; and firm pressure, with occasional friction, should be made over the uterus,

so as to promote its contraction, and expel any coagulum that might have formed within it. At the same time the ergot of rye should be administered with as little delay as possible, since in these cases our chief reliance for the suppression of the discharge is on this remedy. Fifteen or twenty grains of the fresh powder may be given in the first instance, and repeated, if necessary, in forty minutes or an hour. If the discharge be not very profuse it may be more advisable to give the ergot in five or six grain doses every three or four hours; but in every case I would recommend the first dose to be a full one. A caution should here be mentioned respecting its use. If the patient be alarmingly reduced when the practitioner is called in, the propriety of administering ergot will require serious consideration, inasmuch as this drug exercises a decidedly sedative influence upon the system. This property, which, doubtless, enhances the efficacy of ergot in many cases, renders its exhibition questionable where extreme exhaustion is present. If the patient has been only a few (two, three, or four) days brought to bed, it is not desirable on slight grounds to have recourse to cold applications, for fear of inducing uterine inflammation; but if she have been longer confined, or if the flux of blood be immoderate, the same objection does not obtain. The ordinary modes of using cold for the suppression of uterine hemorrhage are well known, and need not be here described. I have seen very excellent effects from an enema of cold water, in which a spoonful of common marine salt had been dissolved. If the bowels require to be unloaded, the enema produces a doubly good effect. Having by the diligent and judicious employment of these measures subdued or greatly abated the discharge, the administration of a moderate dose of black drop, or of liquor opii sedativus, may be resorted to with advantage. It proves useful in many ways; it induces sleep, "nature's sweet restorer;" it allays the nervous excitement and irritation, which so constantly are present in these cases; and it tends to tranquillize the circulation.

It occasionally happens that these means are found inadequate to accomplish the desired end, and something further must be done. To meet this exigency we possess a very powerful resource in the tampon or plug. The danger to be apprehended in using it is internal hemorrhage. Baudelocque and Madame Lachapelle have both recorded cases where a fatal result was produced in this way, one on the seventh and the other on the fifteenth day after delivery. The latter author observes that if the patient have been one or two weeks brought to bed, it is barely possible for the uterus to become distended with blood. In every case, however, such a contingency can and should be guarded against, by securing a pad over the uterus with a well-applied binder; and if this is not deemed a sufficient provision, we can make "assurance doubly sure" by examining from time to time over the hypogastrium, to satisfy ourselves that the womb is not enlarging. Leroux and Chevreul are strong advocates for the tampon, and Baudelocque, though he considered it a last resource, nevertheless admits that he employed it many times with success. Dr. Ingleby says he used it "with the best effect in hemorrhage imminently dangerous, as late as fourteen days after delivery, the uterus being firmly contracted." "More than once," he adds, "I think I have preserved life by the agency of the plug." If the vagina be inflamed or sloughing, either condition would of course forbid the use of the tampon, and under these circumstances nothing but the direst necessity would justify its employment. In such a case as this I should prefer trying an injection of cold water, or, better still, of cold infusion of matico, into the vagina. A silk pocket-handkerchief forms about the best material for a plug that can be used, and it is always at hand. Other substances have been recommended, such as sponge or dossils of linen, or a vulcanized Indian rubber bag which is to be inflated after its introduction. This last is the suggestion of M. Diday of Lyons, and a description of it will be found in the tenth volume of this Journal, p. 129.

The plug should not be allowed to remain longer in the vagina than twenty-four, or at most thirty-six hours.

Several cases could be related illustrating the utility of the tampon, but I need only adduce two or three. Perfect was sent for to a lady who got violent flooding some weeks after delivery. He "stuffed the vagina full of dossils of fine tow and oxycrate; kept the patient in a cool, still, horizontal posture; gave her an opiate, and the flux stopped. On the third day the dossils came away spontaneously. She recovered well, and went through two subsequent pregnancies." The two following examples occurred in the Lying-in Hospital, and came under my own observation. A woman was delivered of her first child after a labour of five hours' duration. Half an hour after the birth of the child, the uterus relaxed, and the pressure applied to it expelled the placenta. This was followed by a slight draining of blood, which was checked by the ordinary means, but recurred two or three times during the day. The next morning (she being then twenty-four hours brought to bed), a large clot was expelled from the vagina, and was followed by pretty copious hemorrhage. As the uterus was not firmly contracted, cold and pressure were made use of, and a dose of ergot administered, but without success, as the loss went on slowly but continuously. An examination was made per vaginam, but nothing abnormal could be detected. The pulse was quick. As the patient had now become extremely weak, and the hemorrhage still continued, the vagina was plugged, and every care at the same time used to prevent the possibility of internal hemorrhage. A blister was also applied over the sacrum. By these measures the discharge was arrested, but the patient was so very weak, that brandy and opium had to be given. Though the pulse continued rapid for some days, she nevertheless made a good recovery. The plug was allowed to remain in the vagina for twenty-four hours, when it was cautiously withdrawn.

A. B. was confined of her fifth child at mid-day, after a

labour of six hours. The placenta came away in twenty-five minutes, and was followed by a slight discharge of blood, which ceased upon tightening the binder and applying a cold wet napkin to the vulva. In the afternoon she had a return of hemorrhage; but it was not severe, and yielded to friction and cold. She remained quite free from all discharge until the following morning, when, on making some exertion, the hemorrhage broke out afresh. The usual means, such as ergot, friction, cold, &c., were now diligently employed, but without avail. There was only one remedy left, and that was the tampon. To its employment there was the less objection, as the uterus felt pretty firmly contracted; accordingly, the vagina was plugged (the usual precautions being observed against internal hemorrhage), and this effectually put a stop to all further loss. The pulse continued quick for several days, and she suffered considerably from headach; but there was no other untoward symptom, and she made a good recovery.

Where the hemorrhage manifests a disposition to recur, or where there is time to admit of it, we should have recourse to constitutional means for its suppression. Keeping in mind the hint which Dr. Ayre's remarks supply, we should satisfy ourselves that the liver and bowels are in a healthy state of action, and, if necessary, prescribe some opening medicine. Where this has been attended to, but without effect on the sanguine discharge, some medicine from the astringent or styptic class should be tried. Acetate of lead is the one most extensively used, but though it enjoys high reputation as a styptic, I cannot say I have ever seen any striking or marked result from its employment in these cases. Dr. Ingleby recommends it specially in irritable habits, but he also says, "under much depression it will be quite inadmissible." It is not improbable that much of its utility in cases of hemorrhage is to be attributed to its sedative property. It is best given in solution, with an excess of acid, and with the addition of a small quantity of acetate of morphia. The same accoucheur states, that in cases

of the kind now under consideration he "can with much confidence recommend the sulphate of zinc, in pills of one or two grains, combined with a quarter or half a grain of opium, or exhibited in the infusion of orange-peel." The dilute sulphuric acid is another remedy largely employed as a hemostatic, but it does not seem to possess any claims for preference in these cases. Within the last few years gallic acid has taken a high place in the list of styptic medicines. Dr. James Hughes[a] and Dr. Neligan[b] have recorded in the pages of this Journal examples of its efficacy in restraining sanguineous discharges from the kidneys, urethra, stomach, uterus, and bowels; and Dr. Stevenson relates several cases of uterine hemorrhage, not, however, connected with pregnancy, which were treated most successfully with this remedy. Last November I saw, along with Mr. Brabazon, surgeon to the Drumcondra Dispensary, a case of excessive uterine hemorrhage, connected with hydatids, in which the gallic acid appeared to act most speedily and efficaciously. This patient was so reduced by the enormous loss of blood she had sustained, that we deemed it unsafe to give her ergot of rye. Whilst these pages were going through the press, I had occasion to exhibit this medicine in a case of protracted hemorrhage after an early abortion, and it acted very promptly and effectually in suppressing the bleeding. It is reasonable, then, to suppose that gallic acid may prove a useful remedy in many cases of secondary hemorrhage. The usual dose is three grains, in the form of pill made with liquorice powder and conserve of roses, every three or four hours. Where the danger is imminent, the dose may be much increased: in urgent cases of hemoptysis, Dr. Christison has given so much as thirty-six grains in twelve hours.

The tincture of Indian hemp and the oxide of silver are two other remedies that have acquired considerable reputation in

[a] New Series, vol. iii. p. 275, and vol. ix. p. 309.

[b] Ibid. vol. ix. p. 347.

the treatment of certain sanguineous discharges from the uterus. The anti-hemorrhagic properties of the former were discovered by Dr. Maguire, of this city; and Dr. Churchill has reported most favourably upon its use in menorrhagia. In one case of uterine hemorrhage nine days subsequently to delivery, I made trial of it, and with a satisfactory result. Donovan's tincture of the resin was the preparation employed in all these instances.

Some time back attention was drawn to the advantages of oxide of silver in menorrhagia, by Dr. Butler Lane and Sir James Eyre. Their observations have been fully confirmed by Dr. Thweatt, of the United States. "The oxide of silver is," he thinks, "best adapted to those forms of menorrhagia which depend on an undue excitation of the uterine organs, accompanied with high inflammatory action. Cases often present themselves where profuse hemorrhage makes its appearance at the usual menstrual period, or immediately after it has passed; in these cases there is an extraordinary excitation of the nervous system. The oxide of silver here often acts like a charm, calms the perturbation of the nervous system, and arrests the hemorrhage by its astringent qualities. It should be given in large doses, and repeated at short intervals, until some effect is apparent. Women, after parturition, are frequently troubled with a sanguineous discharge, distinct from the lochia, which is difficult to remove by the usual remedies. The oxide of silver is an infallible remedy for this pathological condition"[a]. The ordinary dose, he says, is half a grain to one grain twice or three times a-day, combined with a small proportion of opium. If all that this writer affirms of the oxide of silver be true, it deserves to hold an exalted place in the materia medica of the accoucheur; but his praise of it is too unmeasured for implicit belief. A blister to the sacrum is another means that has sometimes been followed by a very marked subsidence

[a] Ranking's Abstract, vol. x. p. 320.

of the discharge. The value of this remedy I learned from Dr. Johnson, when his assistant in the Lying-in Hospital; its *modus operandi* is not very apparent, but of its utility I have witnessed many examples.

If the hemorrhage is of an atonic or passive kind, approaching in character to menorrhagia lochialis, it will probably be found that medicines of the tonic and chalybeate class will prove most serviceable. A very admirable combination in these cases is a mixture composed of sulphate of iron, sulphate of quina, dilute sulphuric acid, and water; if required, a small quantity of Epsom salts may be added. In the following case I had recourse to this mixture with complete success, after having in vain tried other means to conquer the hemorrhage. On September 14, 1848, I delivered Mrs. M. of her seventh child, after a short labour. The placenta came away in ten minutes, together with the membranes and some clots. She recovered so satisfactorily, that I ceased attending on the 22nd. On the evening of the 24th I was requested to visit her again, and found her in a rather weak state, and much frightened, there having been a free discharge of blood from the vagina for some hours,—which had never occurred before, even in her confinements. From the effects of the hemorrhage on her system, and the quantity of linen which was saturated with blood, it was plain that the loss must have been very considerable. Her pulse was quiet, and her bowels had been freed in the morning. I made an internal examination, but could discover nothing, except that the mouth of the womb was rather patulous. I ordered cold wet napkins to be applied to the vulva, and half a drachm of powdered ergot to be given through the night, in three doses. This treatment produced some temporary abatement of the discharge, but did not seem to exercise a decided influence over it. Upon the 27th, finding the loss to be still going on, and the pulse to be perfectly quiet, I ordered the above mixture three times a day.

This very promptly and completely arrested the sanguineous discharge.

Dr. Leake recommends the exhibition of strong infusion of bark and elixir of vitriol, with a small quantity of tincture of cinnamon, as being very efficacious in cases of severe flooding after delivery. That particular variety of secondary hemorrhage I am now speaking of is very fully described by Chambon (Maladies des Femmes en couches); in addition to the tonic plan of treatment, he recommends astringent injections into the uterus.

Before concluding this part of my subject, I should perhaps mention, that oil of turpentine in full doses has been much lauded by Mr. Griffith, of Wrexham, in extreme cases of uterine hemorrhage before and after delivery, as well as in menorrhagia. He gives so much as an ounce, with half that quantity of sweet almond oil, for a dose. This remedy is not suitable, he thinks, in cases where there is a hot skin, a full pulse, and undiminished strength.

Where there is ground for suspecting that the attack of secondary hemorrhage results from the retention of a portion of the placenta, a vaginal examination should at once be made, to determine the question, and to ascertain whether the offending substance be accessible or not, as its speedy removal is most desirable. I would here reiterate the precept already laid down, that in no case of secondary hemorrhage should an internal examination be omitted, since this is the only mode of diagnosis by which we can distinguish with certainty some of the causes that give rise to the discharge; and besides, during the presence of the hemorrhage an opportunity may be afforded for extracting a clot or fragment of placenta, which might not again present itself. Where the retained mass is within reach of the finger, and can be got away without violence, there is no second opinion about the propriety of doing so. But this may not be a matter so

easy of accomplishment, and the question then arises, how far is the practitioner justified in making attempts to withdraw the retained substance? This is a point on which it is impossible to give any definite directions in words. Dr. Ingleby's opinion is, "that whilst rashness cannot be too much deprecated, we should not be justified in abstaining from a cautious attempt, should a favourable opportunity occur, and the mass be within reach of the fingers."

Baudelocque tells us he has seen hemorrhage from this cause not show itself till the tenth day after delivery; and he adds, "When it is abundant, as it was in that case, it requires us to pass the hand into the uterus, to extract the foreign body from it." Further on he gives more judicious advice: "If we were certain of the existence of these portions of the placenta at the time of the deliverance, it would be better to extract them immediately than to wait till succeeding accidents oblige us to it; but if we are not called till some time afterwards, there must be very great accidents to determine us to take the same method." The use of a small crotchet has been recommended by Dr. Dewees for hooking away the foreign body out of the uterine cavity: but this, or any similar instrument, I have never seen used for the purpose, and feel convinced of the impropriety of all such attempts. If the safe removal of the retained bit of placenta be impracticable, we must only employ such palliative measures as shall tend to keep the discharge in check. Strict rest and quietness, cold applications, cold enemata, blistering over the sacrum, plugging the vagina, and the administration of ergot, may be severally or conjointly required, according to the circumstances of the case. Dewees thinks very favourably of the ergot in this kind of hemorrhage; and as a subsidiary means for restraining the discharge, there is no doubt of its occasional value and general admissibility.

Where, from the absence of any other adequate cause, and from the existence of ulceration of the os uteri, we are led to believe that this is the source of the hemorrhage, our

measures should, of course, be directed to heal the breach of surface. The treatment to be pursued in these cases does not differ essentially from that which is applicable to ordinary cases of inflammatory ulceration of the cervix uteri. For full and satisfactory information on this subject, therefore, I must beg to refer the reader to the admirable works of Bennett, Ashwell, and Churchill, as I can here give only a mere outline of the broad principles of treatment. Common prudence will suggest the advisability of postponing topical applications to the os uteri, until the system has recovered from the effects of parturition. If a fortnight or three weeks can be allowed to pass over, so much the better. Then we may begin to touch the surface of the ulcer with the nitrate of silver, or some other caustic,—and many have been proposed,—once or twice a week; a mild injection may be thrown into the vagina daily, and active counter-irritation should be made over the sacrum; this I look upon as a very important part of the treatment, and never to be neglected. Contemporary with these measures, constitutional treatment must in every case be employed. The stomach and bowels having been brought into a healthy state of action, by a course of gentle alteratives and aperients, the administration of tonic medicines may be commenced; our great object being to improve the general health, and to restore the system at large to its most normal condition, that in which all the functions, especially those of nutrition, are performed with the greatest regularity and vigour.

Having in any given case ascertained that the secondary hemorrhage is due to the presence of a polypus, the leading question of practice will be the propriety of removing the growth. Although flooding is not the only symptom which may force this question on our consideration, yet on the present occasion we must confine ourselves to it alone. The following observations, therefore, will be understood to have reference solely to this effect of the polypus. Operative interference with the tumour during the puerperal state is apt to

be attended with unpleasant or dangerous consequences, owing to the increased size and vascularity of the uterus and of the tumour at this period, as well as from the tendency then existing to inflammation or phlebitis. Thus in a case in which Van Doeveren twisted off a polypus during labour, the woman's life was in imminent danger from abdominal inflammation for some days after. Dr. Davis relates a case where the ligature applied to a polypus immediately after delivery produced a fatal result; and in the case recorded by Mr. Fordham, the polypus was tied very soon after delivery, and the woman died next day. The unfortunate result in this instance should not, perhaps, in justice be imputed to the ligature. The urgent symptom which necessitated interference was violent forcing pain, and this could not have been allayed simply by encircling the growth with a cord; excision should have followed.

On the other hand, many cases might be adduced in which the polypus was successfully tied or extirpated before, during, and soon after parturition. Merriman and Gooch relate cases where its removal was effected by ligature, during gestation, without disturbing this process. Van Doeveren successfully twisted off a considerable-sized polypus during labour; and in a like case, where a polypus was obstructing the descent of a six-months fœtus, Pugh tied the pedicle and then excised the growth below. The child was born in half an hour, and the woman recovered well, and was subsequently four times pregnant. In addition to these, numberless other cases could be adduced where the polypus was removed, with complete success, soon after delivery: further on I shall have occasion to quote some of them.

Notwithstanding this array of evidence in favour of the early performance of the operation, it still can hardly admit of question that the safest and most prudent course, in cases of secondary hemorrhage from polypus, will be to forego all attempts at extirpating the tumour as long as possible, or until the woman has recovered from the effects of parturition, when the

attendant risk will be infinitely less. In furtherance of this object we must strive to keep the discharge in check by the diligent use of cold, styptics, the tampon, and, perhaps, ergot of rye. Should the hemorrhage persist in spite of these measures, our only alternative is the removal of the tumour. Torsion, ligature, excision, or a combination of the two last, are the various modes by which this may be effected. The situation of the growth, whether within or without the uterine cavity, the thickness of its pedicle, and the presence or absence of pain, are the chief circumstances which should influence us in determining our mode of proceeding. "If," says Dr. Oldham, "the pedicle of the tumour be within reach, I should prefer, having first tightly drawn a ligature around it, to cut off the polypus immediately below it; as this practice would be likely to quiet the womb, besides arresting the hemorrhage, by diminishing the foreign body which provoked its action, and would save the organ from being exposed to the influence of so much putrid matter by the decomposition of the polypus below the noose. If, however, the polypus is so enclosed by the womb as not to be so readily reached for this purpose, the application of the ligature alone upon its stem is the next best means to be had recourse to. Should the pedicle be ascertained to be small, and the growth very moveable, torsion, perhaps, may be attempted." Of this form of secondary hemorrhage I shall now give a few examples, which will also illustrate each of the above modes of removing the polypoid growth.

"Dr. Ramsbotham was called to a lady about thirty years of age, by Mr. Moon of Tottenham. She had been delivered naturally about three weeks before, and during this time she had had slight and irregular discharges of blood. On the morning Dr. Ramsbotham saw her she had passed blood enough to cause fainting. She took small doses of ergot without relief. 'I found the uterus,' says Dr. Ramsbotham, 'as large as a six months' pregnancy, and tender; a slight discharge was going on *per vaginam;* the uterus was large; the os soft, spread, and close:

I could just get a finger in, and thought there was a secondary fœtus, or large coagulum. I gave ergot in larger quantity, which produced much pain.' On Tuesday morning, after much pain during the night, Mr. Moon felt the os opening, and something within the cavity; and at 2 o'clock, P. M., he was hurriedly sent for, from the severity of the pain, and the nurse finding something protruding. He passed his hand into the uterus without much trouble, by the side of the tumour, and found it attached, by something like a funis, to the fundus. He embraced the stem firmly, and, under strong uterine contraction, his hand and the tumour were expelled together. This lady recovered without a bad symptom."—(Oldham.) M. Jacquemier gives a case in which Cloquet detached a large polypus "by the simple action of his fingers," after parturition, and with the most happy result: the woman recovered speedily.

Dr. Radford writes: "I was called to a woman who had been delivered six hours, the labour having been natural. The discharge was greater than usual with her; and strong bearing-down pains, with gushes of blood, continued to distress her. Between the pains there was a continual dribbling discharge. The contracted uterus was felt above the pubes, rather larger and softer than it usually is; but when the pain recurred it sensibly diminished in size, and became harder. In consequence of the violent uterine pain, I felt convinced that some irritating mechanical body was provoking the organ; as a part of the placenta, a coagulum of blood, a polypus, or a partial inversion of the uterus; and in order to satisfy myself of the real nature of the case, I introduced my hand into the vagina, and the finger through the os uteri, which was open. I felt a firm body, which, when pressed laterally, moved; and, on carrying the finger along the surface, I found it less above than below. I therefore concluded it was a polypus. I gave a drachm of laudanum to quiet the pains, and applied cold vinegar and water to the external genitals, to restrain hemorrhage until I could fix a ligature on the growth. These, however, were

ineffectual; and whilst I was waiting in the house she was seized with a very strong bearing-down pain, like one of the last expulsive pains of labour, which induced me again to examine. I found the tumour in the vagina, at the os externum, quite detached from the uterus, as large as a middle-sized orange, with a slender pedicle. From this time the pains gradually subsided, and the hemorrhage ceased. The patient recovered without the slightest interruption."

The same author details another case where he detached a large polypus, by torsion, from the interior of the uterus, before the withdrawal of the placenta. This patient slowly recovered, but the delay was owing, in a great measure, to all the blood she had lost before Dr. Radford saw her.

In these four cases it will be perceived that the pedicle of the tumour was forcibly severed, in one instance by unaided uterine action, and in the other three by torsion. In those which I am now about to cite, the extirpation of the polypus was effected by means of the ligature. M. Dèguise applied a ligature, after a twin delivery, to a polypus, " du volume d'une poire de bonchretien." The tumour was detached on the eighth day, and the patient did well.

" M. Guyot relates a case where he saw a female, five hours after delivery, in whom a polypus the size of a fœtal head at term was attached, by a flat pedicle two fingers' breadth, to the interior and right side of the womb. It had presented before the head, but there was no loss of blood. On the following day, on account of pains in the groin and loins, he determined to remove it, which he accomplished with perfect success, by ligature and excision."—(Oldham.)

Dr. Montgomery's paper, already quoted, contains the history of a very interesting case, in which he ligatured a large polypus within three weeks after delivery, and with the most satisfactory result.

Dr. Radford was sent for on one occasion, to see an hospital patient who had been delivered naturally and easily on the

previous day. Considerable hemorrhage had taken place. "I found her," he writes, "pale, and the pulse frequent and small. The discharge generally dribbled, but took place frequently in gushes. She was much harassed by violent bearing-down pains. The uterus was felt above the pubis, contracted, but rather larger than common. I now made an ordinary vaginal examination, but could discover nothing beyond the patulous os uteri. Not feeling satisfied with this mode of exploration, I passed the hand into the vagina, and the finger through the os uteri, when I felt a tumour about the size of a large pear, which was attached to the anterior part of the uterus towards the left side. It was pendulous, and, as far as I could ascertain, had a narrow pedicle. I judged it to be a polypus, and knowing the danger to be apprehended from the insidious bleedings which occur in these cases, I at once determined to pass a ligature round the pedicle, which was effected without much trouble. A plug was introduced into the vagina, and secured; and a bandage, with a compress, placed round the lower part of the abdomen. The ligature was tightened daily without pain, and on the eighth day the tumour was detached and the canula withdrawn." This patient perfectly recovered.

The foregoing histories will, I trust, sufficiently illustrate the course to be pursued in the treatment of secondary hemorrhage, when produced by polypus of the uterus.

For instructions as to the management of inversio uteri, when the cause of secondary hemorrhage, I must refer the reader to the various treatises upon the diseases of women, and especially to the monagraphs of Dr. Crosse and Mr. Newnham, as the limits to which I am necessarily restricted will not admit of my entering upon it here. This omission I have no reason to regret, as in the works referred to this subject is amply discussed.

I almost feel that, before concluding, some apology is due for the great length of this paper, which has run much beyond the extent originally designed. The only excuse I can offer

in extenuation of this fault (if such it be regarded) is, that it results from the number of cases detailed, and which I deemed it necessary to insert, as the subject of secondary hemorrhage after parturition is in some measure new, not having hitherto been made the object of any special investigation, or treated of in a distinct and connected manner[a].

[a] Since the above paper went to press I have received Mr. Roberton's "Essays and Notes on the Physiology and Diseases of Women, and on Practical Midwifery," a work only just published. In it I find a section devoted to the consideration of "Secondary Uterine Hemorrhage," containing the results of the author's experience upon this subject. *Sixteen* examples of this species of flooding, many of which occurred to himself, are there recorded. In all these cases the hemorrhage took place within a month after delivery, and in *ten* of them within a fortnight. *Two* women sank under the loss of blood; all the rest recovered. In *ten* instances the attacks of hemorrhage occurred oftener than once.