of "restoratives"—to regard the two things as antagonistic—is to go back a hundred years for our principles of pathology.

In the sense inferred, therefore, it is quite a fallacy to say, that an "effort is being made to restore bleeding in pneumonia." I do not look upon venesection as of any use *quoad* the pneumonia; nor do I believe it has any directly beneficial influence over any inflammation of the body. I advise its employment in pneumonia for the sole purpose of relieving the patient from the pain and perils of asphyxia—from the dangers of a defective or impeded respiratory action; and, consequently, *only in those cases of pneumonia in which the respiration is seriously interfered with.* But such cases are exceptional ones in pneumonia; exceptional, therefore, also, is the application of venesection in pneumonia.

A consideration of these plain facts will, I am sure, satisfy Professor Bennett, that to compare the employment of venesection, combined with the proper use of restoratives, as here recommended in the treatment of a few severe and exceptional cases of pneumonia, with the employment of venesection, together with blistering, purging, vomiting, and starvation, in all cases of pneumonia—is to bring together in argument things of totally different signification.

Happily, I find proofs in Professor Bennett's own paper, that he himself takes very much a similar view of the matter. He admits that the employment of venesection in certain cases is of service. In fact, he says very much what I myself have said. His words are:

"No doubt, also, small bleedings to the extent of eight or twelve ounces, give relief; but in debilitated persons are dangerous; and in all tend, by weakening the strength at a period when the depressed system is struggling to regain its equilibrium, to prolong the convalescence and favour dangerous sequelæ. Still a small bleeding may be employed as a palliative, with caution, to relieve engorgement of the lungs and congestion of the right side of the heart, although it is very rarely required."

In conclusion, I would just like to ask for the proofs, that there is danger in a moderate loss of blood in any case of pneumonia. Whence has Professor Bennett obtained the practical evidence which has satisfied him of the truth of his assertions of the danger? Assuredly, he has not obtained the evidence from his own observation during the last twenty-five years, as he himself does not employ venesection; and assuredly, also, he can draw no fair or legitimate conclusions as to the dangers of venesections, or as to the true effects of venesection, by judging of it from the results of practice of those who have employed it in conjunction with a starving diet, and calomel, and purging, and blistering.

When Professor Bennett talks of the dangers attending the loss of a few ounces of blood in pneumonia, I cannot help asking him to explain how it is that we daily see so many patients in hospital, surgical and medical, the feeble as well as the strong, losing without apparent injury—and often, and especially in lung- and heart-diseases, to their very great relief—large quantities of blood? What proof do these very numerous facts daily under our eyes afford of the danger of the loss of a few ounces of blood?

And one other question I would put to my friend. Of what real use to us are statistics of the results of treatment of pneumonia, as indicative of the comparative remedial value of bleeding and of restoratives, when the statistics are founded on cases in which the bleeding was employed in conjunction with starvation? Almost all the statistics, drawn especially from French authors, are of this kind, and therefore valueless. Surely, to say that venesection

is the cause of the great mortality in pneumonia, in cases where the patients were at the same time both bled and kept upon starvation diet, is a very illogical and inadmissible conclusion.

ON PUERPERAL FEVER.

By T. SNOW BECK, M.D. Lond., F.R.S., Member of the Royal College of Physicians, London.

[Read before the Obstetrical Society of London, February 1st, 1865.]

[Concluded from page 460.]

If the views which have been deduced from this examination of these cases be correct, it follows that one of the principal objects in the prevention of puerperal fever will be to procure a complete and permanent contraction of the uterus after the birth of the child and the expulsion of the placenta.

In the majority of cases of parturition, the uterus contracts readily and firmly; but, in other instances, I must admit that I have found it much more difficult to obtain the complete and persistent contraction than is generally supposed. In our most esteemed works on midwifery, the subject is treated very shortly. For example, the accoucheur is directed to lay his hand on the abdomen, in order that he may satisfy himself that this viscus "is in a safe and proper state of contraction." (Merriman.) Again: "The hand should be placed upon the abdomen to ascertain (from the size of the uterus) whether there are twins; if not, we may proceed to apply the binder, which should embrace the hips inferiorly and the whole abdomen." (Churchill.) Or: "The left hand should be immediately applied over the fundus, in order to maintain a moderate pressure upon the uterus while it is descending towards the pelvis. This should never be neglected; because it ensures a uniform contraction of the uterus, and often the expulsion of the placenta into the vagina." (Murphy.) "In ordinary labour, friction is made with the hand over the hypogastric region: this is repeated from time to time, in order to excite the contractility of the tissue of the organ, its 'degorgement', and the expulsion of any coagula it may contain." (Cazeaux.)

Certainly other means are recommended on the occurrence of hæmorrhage, or in exceptional cases; these means being, to firmly grasp the uterus with one hand, whilst with the other we apply cloths dipped in cold water suddenly to the genitals; to use cold enemata and cold drinks; to pour cold water from a height on the abdomen; to apply pressure by means of a pad placed beneath the binder; to administer ergot of rye; to have recourse to galvanism or electricity; to irritate the organ to contraction by introducing the hand into its cavity; and, lastly, to inject cold water into the uterus. I must, however, admit that in my experience most of these means have failed to effect the object in view. I have not found the external application of cold, cold enemata, cold drinks, or any amount of pressure which could be applied by means of the binder, of much practical good in effecting a firm and persistent contraction of the uterus where there has been any tendency to a lax state. When carefully applied, the binder is, no doubt, a source of much comfort to the woman who has been recently delivered, by supporting the relaxed state of the abdominal walls and giving support to the back. But I have found so little real good from any amount of pressure which could be employed through this means, with the aid of pads or otherwise, whilst the difficulty of applying it and the discomfort it occasioned were so considerable, that I have ceased to employ it for this purpose. When coagula form in the interior of the organ, it is often

required to introduce the hand to remove them; and no doubt the hand is a powerful stimulant to induce contraction, especially when aided by firm external pressure on the uterus, through the means of an assistant. But even these too often fail, as they notably did in the first case recorded; and, when they do induce contraction, it is often not persistent. I have had little experience in the injection of cold water into the cavity of the uterus, or in the application of electricity; yet I do not doubt but they are efficient means to induce contraction. The most trustworthy agent appears to be the local application of cold by means of ice passed up to the orifice of the uterus, and the administration of ergot of rye. Pieces of ice of the size of a hen's egg, or rather larger, are passed up to the orifice of the uterus, and held in that position. The first one or two pieces quickly dissolve, in consequence of the heat of the part; but, when this becomes partly reduced, a firm and persistent contraction is generally the result, though occasionally even this powerful agent will fail. And I may add that, although I have used it now in a great number of cases, I have never seen the slightest inconvenience to result from its employment. Combined with the application of cold direct to the uterus, I have found the administration of ergot of rye a useful addition. It appears to ensure the firm contraction of the organ, and, what is of much importance, to render it persistent.

For some years past, I have carefully observed the state of the uterus immediately after childbirth, considered as a means of obviating that enlargement of the organ which too frequently follows childbirth or abortions, as well as preventing many of the ills to which parturient women are liable. And I am firmly convinced that many of the dangers and evils which women suffer after delivery may be prevented by procuring a complete and persistent contraction of the organ. It would appear that, when the vessels are at all pervious to the circulation of blood within them, the presence of this fluid interferes with those changes which are necessary to reduce this organ to its condition previous to impregnation; and, to this end, I have been led by experience to administer the ergot of rye in all cases after the removal of the placenta, even if its employment was not indicated before this period of the labour. The combination I have found most useful has been that of the tincture of Indian hemp, powdered ergot of rye, and borax, mixed with some stimulant and aromatic. One to four doses of this mixture has been given at one or two hours' interval, according to circumstances, and with the best of results; for, although they occasion a considerable amount of after-pains, yet the comfort afterwards experienced, and the pleasing convalescence, more than compensate for the pains induced.

I believe it is generally considered that, when the uterus is so contracted as to prevent any further hæmorrhage, this is sufficient to ensure the safety and well-being of the woman. But I have found that it is necessary to carry the contraction beyond this point before we can consider that we have ensured the safety, much less the well-doing, of the parturient woman; and I have been led to think that this arises in many instances from a relaxation of the muscular tissue subsequent to the removal of the placenta, and after it has been fully contracted. The second case recorded appears to be an example of this condition of the organ; for here the labour progressed naturally; no hæmorrhage occurred; yet the uterus was found, after death, to be in so relaxed a state as to permit fluids to be injected along its vessels from the large abdominal veins.

If these views be confirmed by the experience of

others, the treatment of women immediately after delivery appears of much more importance than has been commonly supposed; and this extends to the diet, as well as to other matters. It would appear, by reason of a general belief that puerperal fever and other diseases of childbed women were purely inflammatory affections, which required to be treated by large bleedings and means calculated to prevent or reduce inflammation, that women during the puerperum were kept on a low and depressing diet. But these opinions are now generally considered to have been erroneous; and that, instead of keeping the female to a low and depressing diet, she requires a good diet and nourishing support, in order to relieve her from the physical fatigue and mental anxiety of the labour, to restore her health from the waste occasioned by the previous months of pregnancy, and to enable her to pass through those subsequent changes which have yet to take place. To this end, it would appear that a liberal diet is necessary, and, in some cases, even the addition of a stimulant. Of course, the regulation of these matters depends much upon the previous habits and state of health of the woman, as well as upon the season of the year and other incidental circumstances; but I am convinced there is not that danger in a liberal supporting diet which was at one time so generally believed, and that a stimulant similar to the "caudle" of old may frequently be given with much advantage. This appears to be confirmed by the remark of Dr. Ferguson in his valuable essay already referred to. "The late matron of the hospital," he observes, "Mrs. Wright, remarked the effect of the hospital diet on the patients as often very depressing; and knowing, from the habits of this class of people, that gin was to many of them the common substitute for meat, she was induced to change the hospital dietary for a caudle in which gin was the staple. *We shortly after this had a marked diminution in the intensity of the epidemic.*" (P. 168.)

It is a general remark, that primiparæ are more liable to be attacked with puerperal fever than women who have previously borne children; and many explanations have been offered to account for this fact. But it appears to have been overlooked, that much of this greater liability may be attributed to the circumstances which are brought into action in a first confinement. In many women, the uterus does not take on the changes consequent upon pregnancy and delivery with the same degree of completeness, so to speak, or with equal facility, as in others. In some, the uterine organs are so badly developed as never to become impregnated. In others, the uterus appears to be only capable of a certain amount of development; for, after it has grown for a few months, it becomes thin, appears overstretched, and in a short time abortion takes place. I have known women to miscarry time after time, and generally about the same period of pregnancy, from apparently this cause. In other cases, again, the female goes the full period; but the uterus appears so ill developed as to be incapable of power sufficient to expel the child without artificial assistance, or of maintaining a sufficient amount of contraction afterwards to ensure the safety of the mother. The aptitude, as it has been termed, to bear children, is thus sometimes wanting in females; but this is only discovered when they become pregnant with the first child. Another source also exists in the fact that first confinements are, as a rule, more laborious and more exhausting than subsequent pregnancies. And to these causes we may not improperly attribute a large amount of the greater proclivity to this disease observed in primiparæ.

May we not attribute to the various causes which

have been glanced at the greater frequency of puerperal fever in hospitals, and amongst the poorer classes who are attended by midwives? I understand it to be the rule in these institutions, that, after the child is born, the soiled things are removed, a binder is applied, and some gruel given. If the after-pains be severe, a soothing dose of laudanum is then administered. Little or no attention appears to be paid to ensure the complete and permanent contraction of the uterus; and as little attention is paid to the diet necessary to meet the habits and state of health of the women who frequent these institutions. Is this the explanation to the following passage from Dr. F. Churchill's learned introduction to the Sydenham edition of *Essays on Puerperal Fever*? "I would remark, then, in the first place, that there appears some special connexion between the epidemics of puerperal fever and lying-in hospitals. I do not mean exactly to assert that these epidemics always originate with, and are kept up by, the hospitals; but I refer to the fact that we have no record of any epidemic independent of them in early times. . . . No doubt it has since been observed in private practice in London, Edinburgh, Sunderland, Leeds, etc., etc.; but its extent in these cases is, after all, comparatively limited, except in very sickly times; and it is often confined chiefly to the practice of a few individuals. In Dublin, the higher ranks have been singularly free from attacks of this disease. Dr. Joseph Clarke, whose account of puerperal fever as it appeared in the hospital is here reprinted, practised for forty-four years in this city, during which time he attended 3,847 cases of midwifery, and yet in that number he met only three cases of acute peritonitis, and three others whose disease appears doubtful, but which might possibly have been uterine phlebitis. And this singular fact, which is to me inexplicable, is confirmed by the experience of Drs. Collins, Johnson, and others, as they have assured me." (P. 32.)

When, in spite of all the care we may take of the woman during her labour, and for the first twelve hours or so afterwards, poisonous infection of the system occurs, the treatment becomes essentially modified. And here the remarks of Cruveilhier, as quoted by Dr. Ferguson, apply with much force: "What treatment shall we oppose to purulent infection? To this question experience is as yet dumb, while theory would seem to point to diffusible stimuli and tonics; to ammonia, quinine, and to sudorifics; to hot external applications; to the vapour-bath; to purgatives, especially to emetics; to tartarised antimony, in large doses; to vesicatories; and to strong diuretics. Calomel has been extensively employed to create a fluxion from the intestinal mucous membrane; but all these means have failed as signally in my hands as in those of others. Yet when the injection of putrid matters into the veins of living animals has been followed by abundant and very fetid evacuations, they have usually got well. It is a fundamental fact of pathology, that the intestinal canal is chiefly affected in diseases caused by any miasmata. The ancients expressed this truth by saying that the intestinal canal attracted the poison of febrile diseases. I am certain that diseases resulting from purulent infection would not be stamped with the seal of incurability, and that nature, seconded by art, would triumph in the majority of cases, if the pus, which is incessantly renewed, did not incessantly renew the sources of infection."

The principles of treatment, which the review of these cases would suggest, would then appear to be: (1) to prevent the further injurious impregnation of the system, either by obstructing the further flow along the uterine sinuses, or by removing the noxious

fluids from the interior of the uterus; (2) by supporting the system during the struggle in which it is engaged, and by meeting any accidental complication which may present itself; and (3) perhaps a further source of treatment is now afforded which may enable us to counteract, to some extent at least, the deleterious impregnation which has already taken place.

1. The metamorphosis or disintegration which takes place in the muscular tissue of the uterus after childbirth prior to its removal do not, it is said, commence before the fourth or sixth day; and, as the symptoms of injurious impregnation usually show themselves on the second or third day, it is not improbable that means might still be found to induce that further small amount of contraction in the organ which is necessary to close effectually the uterine sinuses. A continuous current of electricity, of low intensity, might have this effect. But I fear the other means already adverted to do not afford much chance of success; for it is undeniable that a truly efficient agent to induce the permanent contraction of the uterus is still a great desideratum.

The same object may be attained by the coagulation of the blood in the sinuses; and there is good reason to believe that this is not unfrequently the result of noxious fluids being mixed with the blood. We also know that any great depression of the system favours this coagulation; and it is not impossible that the copious bleedings which are said to have been employed with such good results may have acted in this way. "When I took away," says Dr. Gordon, "only ten or twelve ounces of blood from my patient, she always died; but when I had the courage to take away twenty or twenty-four ounces at one bleeding in the beginning of the disease (i. e., within six or eight hours after the attack), the patient never failed to recover." But, whether this be the result of these copious bleedings or not, there are few, I think, at the present day, who would have the boldness to have recourse to them, or who would forget the experience mentioned by Dr. Farre in his *Journal*, and quoted by Dr. Gooch. "At the East End of London, not far from the river, the disease (puerperal fever) proved still more fatal during the month of March (1825). One surgeon informed the editor that he had lost seven, another four, in all of which the disease was treated at the instant of its formation by active blood-letting. A physician-accoucheur, who attended in consultation many of these cases, stated to him that, out of thirteen cases, eleven died; that all which had been bled died; and that the only two which recovered had not been bled, having been treated by turpentine." "The experience of the last four years has brought me," observes Dr. Gooch, "to this conclusion, that the sanguine hopes which were entertained, a few years ago, that the peritoneal fevers of lying-in women are always of an acute inflammatory type, and always to be cured by early bleeding and purging, as they were not borne out by the reasoning employed, so they have not been confirmed by subsequent experience." (*On some of the most important Diseases peculiar to Women.*)

The removal of the noxious fluids from the interior of the uterus appears to afford an important means of treatment, and to furnish one of the objects mentioned by Cruveilhier. "I am certain that diseases resulting from purulent infection would not be stamped with the seal of incurability, and that nature, seconded by art, would triumph in the majority of cases, if the pus, which is incessantly renewed, did not incessantly renew the sources of infection." But, in using these means, the remarks of Dr. Denman, though written so long ago, should be borne in remembrance: "I have seldom attempted to inject

medicines of any kind into the vagina and uterus; though, from a consideration of the state of these parts, and of the fetid humours discharged from them, it is reasonable to expect that emollient or gentle detergent injections might be useful. However, if these are advised, there should be great caution both in the composing and administering of them." (P. 60.)

On this subject, M. Piorry remarked, in the discussion on the treatment of puerperal fever before the Imperial Academy of Medicine at Paris in 1858: "It is indispensable to cleanse, by means of injections carefully employed, the uterine cavity from blood and putrid sanies which it contains. During five years I have not seen one female perish who has been attacked with puerperal peritonitis; and, in all women who have been confined, uterine injections have been carefully employed." (*Bullet. de l'Acad. Impériale de Med.*, vol. xxiii, p. 461.) M. Hervez de Chégoin also observed: "The injections of the uterus, of which I have spoken, ought to be placed in the first rank (in the treatment); and, as I have said, their efficacy depends upon their proper use—that is to say, the care of the physician to seize the suitable moment. It ought to be directly upon the occurrence of the first indication, so slight and so important, and upon which I have fixed the attention." (P. 470.)

The substances which offer the greatest probability of success are a weak solution of the sulphites or hyposulphites in tepid water. A long elastic tube may be passed to the fundus of the uterine cavity, and the interior of the organ carefully washed out with a weak solution of sulphite or hyposulphite of soda, by means of the ordinary enema apparatus; care being taken that no force be employed, and that all air be excluded from the apparatus prior to its introduction, by passing the fluid through it several times. The noxious fluids may thus, to a great extent, be removed; and, should any of the injected fluid gain entrance into the uterine sinuses, it will probably be more beneficial than injurious. This washing out of the uterine cavity may be repeated each day, or at shorter intervals, according to the circumstances of the particular case.

2. The means to support the system during the struggle, and to meet any accidental complication, are too well known to require any remarks.

3. As Cruveilhier observed, after detailing the various means employed to combat purulent infection, "all these means have failed as signally in my hands as in those of others." But, since that period, the researches of Dr. Polli of Milan, and of Dr. Mariano Semmola, upon the action of the sulphites, have rendered it probable that these agents may be found of much value in the treatment of injurious impregnation of the system, even after this has taken place. Both these observers concur in the opinion that these agents possess a remarkable power in putrid infections of the system, when they are not the result of specific disease. They are given in divided doses, to the amount of from three to four drachms in the twenty-four hours; and the sulphites of magnesia or lime would appear to be the most suitable for internal administration. I have given lately these remedies in some cases, in doses of one scruple to one drachm every two or three hours, with encouraging results; but my experience of them is too limited to admit of any opinion.

In concluding these imperfect observations, I would remark, that I am fully aware there are many points of much interest in this important subject which have not been touched upon; but to notice all the points would have been to go over ground which has been most ably handled by others, as well as to

render this notice too lengthy. No one can be more convinced than I am of the imperfect nature of the present communication; but I thought it better to submit the observations as they are, to be tested by the experience of others, than to wait until I had accumulated further facts myself. Of the facts, I believe they will be found to be correct; but the deductions drawn from them must be tested by further clinical experience and the observations of independent observers.

Transactions of Branches.

BATH AND BRISTOL BRANCH.

NOTES ON CANCER: THE ADVANTAGES OF AN EARLY OPERATION IN CERTAIN CASES: CASE OF OPERATION FOR CANCER OF THE NON-DESCENDED TESTICLE.

By W. MICHELL CLARKE, Esq., Surgeon to the Bristol General Hospital.

[Read October 17th, 1864.]

I SUPPOSE that few men have passed many years in the active pursuit of medical practice, without having frequently meditated, and sadly too, upon the subject of cancer. What is its origin, what its nature, what relation does it bear to the patient's constitution, and what to external injury or irritation? These are questions that we must have often put to ourselves; but I need not say to you that they are questions which, in the present state of our knowledge, we cannot answer. Cancer is at this day almost as intractable as to the information it will yield us of its source and nature, and also as to its treatment, as it has been in all medical history.

Indeed it seems, at present, quite useless to spend much time in the consideration of such questions as I have mentioned; although there are one or more, such as the question of the hereditary or constitutional origin of cancer, and its causation by external injury or irritation, about which much may be learned from the writings of various authors, and much that is useful is ascertained.

But, even with reference to these limited points, it must be evident to every one who has seen much of the disease, that the cases which present themselves differ from each other almost as widely as distinct diseases differ. No one can doubt that, in such cases as we not uncommonly meet with, where the disease simultaneously invades many and distant organs, or in such rapid succession that they appear to have been attacked at once, it must have had its origin in a constitutional dyscrasia, and that local irritation can have had but little to do with the production of such a malady; whereas, on the other side, how difficult is it to recognise a diathetic causation when the disease, beginning from a blow or some other injury to an external part, remains for a long time local, and may even be arrested by the interference of the surgeon. And yet such perplexing cases do not only occur, but they present themselves to our observation almost every day.

This great variety in the characters presented by different cases of this terrible disease has given rise to opinions as various upon the subject of its treatment. That there is no medicine capable of curing it, all will allow; but whether in any case surgery should interfere, has been, and still is, argued with very shifting results as to the conclusion.