and the stomach, the so-called chylipoietic viscera. In fact, it seems to me that the albuminuria which appears to have resulted from mental and emotional influence is a form of albuminuria from dyspepsia, and the immediate cause of the renal disorder is the excretion of some abnormal products of imperfect digestion. In many of these cases, too, it is obvious that more than one etiological agency has been operative. The man or the woman depressed by mental anxiety, with a failing appetite and disturbed sleep, often seeks temporary relief from misery in an alcoholic stimulant; and so it is often found that the noxious influence of alcohol as a substitute for wholesome food has to be taken into account in explaining the albuminuria and the renal degeneration which had their starting-point in mental worry.

We now come to our second proposition, which is that the presence of albumen in the urine, although small in amount, and appearing only occasionally in the urine of persons otherwise apparently in good health, is abnormal and pathological. The main point of practice, therefore, is to make diligent inquiry for the probable cause of this abnormal condition; and then, having ascertained it, we can instruct our patient how both to avoid the exciting cause and to counteract its effects. It is sometimes difficult to convince a man or a boy, who, but for his doctor's statement that his urine misbehaves itself under the influence of heat and nitric acid, would believe himself in perfect health, that it is necessary for him to submit to any restraint in his diet or general mode of living. It therefore becomes necessary to explain to him what may be the result of negligence in this matter. The result of my experience is, that the occasional appearance of even a small amount of albumen after food and exercise or exposure to cold, if not traced to its exciting cause, and if the cause be not such as can be avoided or counteracted, will almost certainly, at no distant period, become a persistent albuminuria; and persistent albuminuria leads on sooner or later to fatal degeneration of the kidney. It is true that many years may pass before the renal disease begins to react upon the general health. The most protracted case of the kind that has come under my own observation occurred in a hard-working general practitioner, who, when fifteen years of age, had dropsy after scarlet fever. He recovered from the dropsy, and believed himself to be well. Five years later, he was a medical student; and while he and some of his fellow-students were engaged in testing each other's urine, his was found to be albuminous. The albuminuria continued until his death from uræmia, at the age of forty-five; yet, until within a few months of his death, he was in fairly good health and actively engaged in a large practice. Here, then, was an interval of thirty years between the beginning and the end of the fatal malady, yet during the whole of that period, it might have been said of him, "*hæret lateri lethalis arundo*". In another case, an interval of nine years elapsed between recovery from acute renal dropsy, but with persistent albuminuria and oily casts, during which the general health appeared to be quite unaffected. Then came an attack of hemiplegia and a series of uræmic symptoms, ending in fatal coma, ten years after the commencement of the disease. A considerable number of cases have come under my observation at a late period of a chronic disease, in which there has been reason to believe that, albuminuria having persisted after an acute attack long before, there has been an interval of from ten to fifteen years between the commencement and the fatal termination of the malady. Since, then, the only probable result of a neglected and persistent albuminuria is a fatal degeneration of the kidney, with the multifarious miseries resulting from uræmic poisoning, it is obviously of the highest importance to impress upon the patient the necessity for a continuous systematic treatment, dietetic, hygienic, and medicinal, adapted to the circumstances of each case. As a general rule, it will be found that, *ceteris paribus*, the earlier the patient is subjected to treatment after the onset of the symptoms, the more speedy and complete is the success; but we sometimes have the satisfaction of witnessing a complete recovery after a very long continued albuminuria. One of the most satisfactory cases of recovery after a long duration of threatening symptoms was that of a very distinguished medical graduate of London, who, when he consulted me in November 1877, was twenty-six years of age. His urine had been continuously albuminous after food, since an attack of scarlet fever in June 1871. In spite of the anxiety which this symptom had occasioned, his general health had been good, and he had worked hard and obtained the highest honours at the university. I advised him to place his main reliance upon a carefully regulated diet. Under the influence of an exclusive milk-diet for five or six weeks, the albumen had much diminished. He then took a small quantity of solid food; and, after a time, a two-ounce glass of Hunyadi water every morning, which, acting rather freely on the bowels, relieved him of a dull pain before felt in the region of the liver, and still further reduced the amount of albumen. During the month of July 1878, the albumen disappeared; and for the last eighteen months there has been no recurrence of the symptom. In this case, then, albuminuria of seven

years' duration has been completely removed, and I have lately seen the former patient in perfect health. The complete recovery of health after so long a continuance of the symptoms may afford encouragement to those who are engaged in the treatment of these troublesome and anxious cases. On the subject of treatment, I shall have something to say on a future occasion.

ON INTRA-UTERINE MEDICATION.*

By LOMBE ATTHILL, M.D.,

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THE principles which should guide our treatment in many forms of uterine disease are still but imperfectly understood; nor is this to be wondered at, seeing that but a few years have elapsed since the diseases of the reproductive organs in the female began to be the subject of special study, and then for a long time the cervix was looked upon as being the chief seat of uterine disease, the body and fundus being supposed to be nearly exempt from it; and if any more accurate observer suspected that these portions of the organ were implicated, he did not venture to apply any remedy directly to the diseased parts, looking on the interior of the uterus as at once inaccessible and dangerous to be interfered with. All this has changed; few, if any, of those who have carefully investigated the diseases to which women are peculiarly liable will deny that the body of the uterus, and specially its intra-uterine surface, is often the seat of disease; while the majority, I believe, are convinced that this portion of the organ is, in many cases, alone implicated, and that frequently the cervix, when also engaged, is secondarily affected. I am satisfied of the correctness of this view; and consequently, when dealing with cases exhibiting symptoms of intra-uterine disease, I invariably direct my treatment to the diseased surface. It is necessary, then, to consider what are the symptoms indicating the necessity of intra-uterine treatment. They are threefold: 1. Derangements of the menstrual functions—namely, menorrhagia, amenorrhœa, and dysmenorrhœa; 2. Uterine catarrh; 3. Pain, specially if caused by the passage of the uterine sound.

It would be impossible in a brief review of the subject to dwell at any length on the important points connected with the right interpretation of these symptoms. I shall therefore only allude to one or two, excluding altogether from consideration those depending on the presence of any form of uterine tumours or polypus, or those resulting from anæmia.

Menorrhagia, as the result of intra-uterine disease, is most commonly, but not by any means necessarily, met with in women who have borne children, and in whom the uterus has been imperfectly involuted; consequently, it can in them be traced back to a previous confinement or abortion. In such cases, especially if menstruation be also painful, a cure can seldom be effected without having recourse to intra-uterine medication.

Amenorrhœa is comparatively seldom observed as a symptom of intra-uterine disease; and, when it does occur, is generally met with in sterile women. In these patients, the whole structure of the uterus probably is affected: the walls are hypertrophied, and there is hyperæsthesia; while the intra-uterine mucous membrane becomes unhealthy, but, instead of being thickened and studded with vascular papillæ, as is generally the case when involution has been imperfect, it appears to be thinner than normal, and consequently those changes which occur at each menstrual epoch are incompletely performed. It should be borne in mind that, when speaking of amenorrhœa, I do not refer to absolute suppression of menstruation, but to an imperfect and scanty discharge, occurring at somewhat irregular intervals.

Dysmenorrhœa, considered as indicating the necessity of intra-uterine medication, is seldom a solitary symptom, and is generally found in connection with menorrhagia.

Uterine catarrh necessarily indicates the existence of disease, or at least of great irritation, of the intra-uterine mucous membrane; for the discharge from its surface, when in a state of health, is almost imperceptible.

Pain is so commonly an accompaniment of uterine disease that much weight cannot be attached to its presence; but if acute pain follow the introduction of the sound, especially if this be severe when the point of the instrument touches the fundus, intra-uterine treatment is generally called for.

One or more of the symptoms thus briefly sketched are present in the majority of cases of intra-uterine disease; and I am decidedly of opinion that in such cure cannot be effected without having recourse to intra-

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Cork, August 1879.

uterine medication. It remains, then, to consider, in carrying out this practice, what methods and remedies are at the same time the safest and most efficient. None are absolutely safe; for, in certain states of the constitution, the mildest application, sometimes even the mere introduction of the sound, will suffice to excite local inflammation.

My own experience leads me to the conclusion (and on the present occasion, when the subject is being brought before the Association by others, I intend to refer to my own experience alone), that fluids should never be injected into the cavity of the uterus, unless the cervix be first freely dilated, and that that form of intra-uterine medication is unsafe and objectionable, that ointments are difficult of application and inefficient, and that the same remark applies to the insufflation of powders. I use the following agents only, and find them so efficient that I hesitate to change them for others: carbolic acid, tincture of iodine, iodised phenol, nitric acid, solid nitrate of silver, zinc points, crayons of iodoform. The use of carbolic acid for intra-uterine medication was first advocated by Dr. Playfair, and, after an extended trial, I fully endorse his observations; it is the safest of all the agents I have named. For the last five years, I have used it daily, both in private as well as hospital practice. The probe, by means of which the agent is carried to the fundus, must be passed up twice, for much of the acid with which the cotton is charged is neutralised as it passes through the cervical canal the first time. It is, therefore, essential that the probe be withdrawn and dipped again in the solution and reintroduced. This second application is more painful than the first, but the pain dies rapidly away, for the acid is a decided local anæsthetic. The preparation which I in general use is composed of two parts of carbolic acid and one part spirits or glycerine. It will in general be found necessary to apply carbolic acid every three or four days for some weeks. Iodine I use comparatively rarely. It is by no means as satisfactory an agent as carbolic acid, and is, moreover, a dirty application, soiling the patient's clothes, and causing a disagreeable smell. It is, however, sometimes useful, specially as an alternative. Iodised phenol (iodine one part, crystallised carbolic acid two parts; mix, and combine by gentle heat), introduced by Dr. Battey of Georgia, is an escharotic of some power, and if diluted, is a very satisfactory application in many cases of intra-uterine disease, specially in chronic endometritis, occurring in old women, in whom a foetid discharge frequently occurs; but it is by no means as energetic as nitric acid, and in recent cases is less efficient.

Nitric acid should only be employed in severe cases, and if properly applied, and if due care be used, is at once a most efficient and safe agent. Two precautions should, however, never be omitted. First, the patient should be kept quiet for a day, or even longer, after the application. The acid itself causes little pain; but, nevertheless, I make it a rule always to keep the patient in bed for at least twenty-four hours after applying it. Consequently, it is an agent which should not be made use of for the purpose of intra-uterine medication, except at the patient's house, or with inter-hospital patients. Secondly, it should never be applied to the interior of the uterus except through a cannula; those of vulcanite or platinum, made after my pattern, can be had of most instrument makers. The annexed woodcut (fig. 1) shows

Fig. 1.

the cannula and stylette, which should be employed when dilatation of the uterus has not been practised. It should be introduced into the uterus by means of the stylette, in the same manner as the uterine sound, and the stylette being withdrawn, the acid is to be carried up to the fundus through the cannula by means of a layer of cotton carefully rolled round the rod, and saturated with the acid. Fig. 2 represents

Fig. 2.

the tube, half an inch in diameter, through which the acid is to be passed up to the fundus in cases in which the cervical canal has been dilated.

In a paper I published in the *Obstetrical Journal* for June 1873, I laid it down as a rule that, in all cases of intra-uterine disease in which nitric acid is used, "the cervical canal should be protected" by means of a tube or cannula. It seems to me that this important precaution has

been neglected by many practitioners, who then declare that unpleasant results have followed, and blame the agent, whereas they themselves are solely to blame, because they did not use the acid in the proper manner or with due care. I again repeat that, if properly used, there is no danger of unpleasant results following the use of nitric acid in cases of intra-uterine disease, but that, if the cervical canal be not protected, it is very liable to contract subsequently.

Solid nitrate of silver is very useful in some cases of intra-uterine disease, as are also zinc points; but both sometimes cause considerable pain, and cellulitis is more likely to follow on their use than on that of any of the other agents I have named. They are most useful in those cases in which menorrhagia occurs, the os and cervical canal being patulous, but the uterus not much enlarged, and in which we have reason to think that the hæmorrhage is due to a vascular condition of the intra-uterine mucous membrane, rather than to the existence of a thickened and granular condition of its surface. They should not be used if copious uterine catarrh be present.

As to iodoform, I am disappointed in the results I have obtained from its use; it certainly sometimes allays pain, but is uncertain in its action, and has little, if any, effect as a caustic.

ON THE MANAGEMENT OF CASES OF EXCISION OF THE KNEE-JOINT.

By EBEN WATSON, M.A., M.D.,

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MY principal object in the following short paper is to recommend a method of fixing the limb after excision of the knee-joint, which cannot indeed be called new, for I first published an account of it in the *Glasgow Medical Journal* for October 1859, but which I venture to think deserves fuller recognition by surgeons than it has yet obtained; and I therefore wish to bring it under the notice of the members of the British Medical Association, especially of those who attended the meeting at Cork last autumn; for Mr. Hilliard of Glasgow, who has always made the splint for me, at my request, exhibited and explained a model of it on the occasion referred to.

"A B is a firm band of iron on which are fixed D D, etc., bands of flexible tin about three inches apart, and in length about two-thirds