of air, and the formation of coagula. The first I have entirely overcome by the use of an air-receiver. The second, by preparing the blood of the donor before it is drawn from his vein. I have attested by repeated experiments that the administration of as large a dose of ammonia and of a saline as can well be tolerated, ten minutes before blood is allowed to flow, very effectively retards coagulation. The transfuser may be used either to inject whole blood or defibrinated blood; or saline solutions may be substituted where vital fluid is not obtainable.

NOCTURNAL ENURESIS TREATED BY VOLTAIC ALTERNATIVES.

By JULIUS ALTHAUS, M.D., M.R.C.P.,

Senior Physician to the Hospital for Epilepsy and Paralysis, Regent's Park.

In June 1882, I was consulted in the case of a boy, aged 15, who had suffered from incontinence of urine during sleep, ever since he was nine years of age. He had been treated with belladonna and other medicines without relief; and as he was about to enter a public school, where a continuance of this trouble might have been particularly annoying, the parents were very anxious that something more should be done. The boy's general health was good, but he was considered a nervous child, and highly sensitive. There were no ascariæ, but he had a very long prepuce which could only with difficulty be retracted. There was, however, no suspicion of masturbation. Treatment by electricity having been recommended, I applied the middle-sized circular cathode over the region of the bladder, and the large oblong anode (five inches by two) to the lumbar portion of the spine. The current-strength 2.50 milli-amperes, for five minutes at a time. As after a few such applications no material benefit appeared to have been gained, I then added fifty voltaic alternatives produced in the metallic circuit. The night after this was free from the usual annoyance, and the boy has made an apparently uninterrupted recovery.

Sir Henry Thompson, in his article on Disorders of Micturition in Quain's *Dictionary of Medicine*, recommends the injection of a téngrain solution of nitrate of silver to the prostatic portion of the urethra and the neck of the bladder, for that troublesome minority of cases in which belladonna has no influence; and he says not a single word about electricity. It appears to me, however, that the mode of using electricity which I have just described, and from which I have seen satisfactory results in a considerable number of cases, is much to be preferred, from being more manageable, and also painless. Nitrate of silver injected into the urethra of children, may cause considerable local pain and general systemic disturbance, more especially as these patients are generally found to have inherited the neurotic constitution, and to be unduly sensitive.

Seeligmüller and Erb likewise report good results from the use of electricity in enuresis. The former's method consists of the introduction of a wire-electrode, about one centimètre long, into the orifice of the urethra (whether male or female), this is connected with the negative pole of the secondary faradic current, the moistened anode being applied over the os pubis. Erb, in his recent *Handbook of Electro-Therapeutics* (Leipzig, 1882, p. 680) recommends, in addition to an external application of faradism to the spine, the os pubis and the perinæum, the insertion of a wire electrode, two centimètres long, into the male urethra, while in girls a small sponge-electrode is applied between the labia, close to the orifice of the urethra. He pronounces the results obtained by this method to be excellent. It will probably be allowed that the method I have described above, will, *cæteris paribus*, be preferable to those of Seeligmüller and Erb, more especially in the case of girls.

The affection arises, according to Sir Henry Thompson (*loc. cit.* p. 984) not from inability of the bladder to retain a small quantity of urine, but from its undue excitability and readiness to contract; and there can be no doubt that in many cases such undue excitability, not perhaps so much of the bladder itself, as of its centres in the spinal cord, is at the bottom of the affection. It is in such cases that belladonna proves serviceable. In others, however, the exceedingly profound sleep, which is so common in such patients, together with debility of the sphincter of the bladder, or rather of its centre in the lumbar enlargement of the cord, must be considered as conducive to the disorder. In such cases belladonna fails to relieve, while electricity, being a stimulant as well as a sedative, appears suitable for both classes of cases, although more especially for the latter.

ON A NEW FORM OF INTRA-UTERINE PESSARY.*

By JOHN G. NEVITT, M.R.C.S.Eng., Chapel Allerton.

I HAVE an old fashioned prejudice as to the sanctity of the intra-uterine cavity, but experience has shown me cases, whose only hope of relief lay in the proper application of an intra-uterine support. A very obstinate case of acute antelexion, with bladder-symptoms, and mental trouble (which the pessaries I tried failed to relieve), set me to work, with the result I now bring to your notice. I was not, at that time, acquainted with the admirable instrument of Dr. Wynn Williams, or, possibly, I should have relinquished my self-imposed task as inventor, for the more agreeable, because less irksome, one of utiliser. However, having endured the pangs of maternity, it is now my pleasing duty to bring the offspring before you, and, like a fond parent, point out to you what I consider to be its superiority.

There are four main objects desirable in all pessaries: 1, efficiency when *in situ*; 2, few points for retention of secretion; 3, ease of introduction; 4, ease of extraction. I claim for the pessary I show you all these desiderata, plus a few other recommendations.

By the elasticity of the ring, it easily adapts itself to the surrounding parts, and thus takes a firmer hold. By means of the rubber bands, the position of the stem, in relation to the axis of the pelvis, can be altered as required. The spaces between the bands allow the free passage of vaginal injections, and thus ensure cleanliness. The bands are easily replaced if worn or broken. Each ring fits any stem. The ordinary Simpson's sound is the introducer. These advantages have only to be mentioned to recommend themselves.

I am sorry that the shortness of the time since the completion of the pessary, and my not being connected with any hospital for women, prevents my being able to give you a long list of results; but, in the two cases in which I have tried it, it proved satisfactory. I wish to record my opinion that the cases in which intra-uterine stems are absolutely necessary, are not of frequent occurrence, and, in the necessary cases, they are not always permissible. There seems to be the same danger with surgeons as with nations, who, having a very efficient armamentarium, make a case to utilise it.

The pessary is made for me by Messrs. Mayer and Meltzer, to whom I have to express my indebtedness for valuable hints.

Dr. BARRON (Southport) said that the chief objection to the instrument described was, that the stem was not sufficiently firmly fixed, and might possibly slip out of place. The elastic bands allowed too much lateral and vertical motion; and thus by getting out of order the pessary might cause considerable mischief and difficulty.

Dr. DEWAR (London) thought Mr. Nevitt's instrument had no advantage over those of Routh, Wynn Williams, or Meadows and Bisichs: it was too heavy and too long in the stem. A stem should never reach the fundus uteri, as it often did harm. The advantage of Mr. Nevitt's instrument might be the movable cross-bar of his transverse band.

Dr. MCARTHUR (Anstruther) considered the pessary to be of very ingenious construction; and that, where an intra-uterine stem was absolutely necessary, it was likely to prove very useful. He objected, however, to the length of the stem, owing to the danger which might arise from ulceration or even penetration of the fundus. With care in the adaptation of the length of the stem, the instrument was likely to be both safe and efficient.

Dr. CULLINGWORTH (Manchester) said one advantage of bringing new instruments before one's professional brethren was that, in this way, improvements were often suggested in points of detail. Doubtless the stem in the instruments exhibited was unnecessarily and undesirably long; but that Mr. Nevitt could very easily have altered. He thought the pessary was ingenious, and possessed many advantages; and he certainly should try it when an opportunity offered, although he quite agreed with Mr. Nevitt that the number of cases requiring intra-uterine pessaries was exceedingly small.

Mr. DONOVAN (Whitworth) had much pleasure in seeing that the use of the intra-uterine stem was being improved off the face of the earth. At the Manchester meeting, a stem was brought forward as a panacea for all the ills that the uterus was heir to. At Bath, also, a similar stem was brought forward. In both instances, he opposed their use. Mr. Nevitt deserved the thanks of the section for the very moderate way in which he had brought the subject forward; and for

* Read in the Section of Obstetric Medicine at the Annual Meeting of the British Medical Association in Worcester, August 1882.

the acknowledgment that the intra-uterine stem was only to be used in a very small number of cases.

Mr. F. G. STEVENS (Bristol) asked if it were necessary, when using the intra-uterine stem, to have a ring, or anything else of the kind, to keep it in place.

Mr. NEVITT, in reply to Dr. Barron, said he did not find in practice that the stem became loosened from its socket. Dr. Dewar had pronounced it clumsy, and the stem too long, but members must bear in mind that the instrument was as yet in its crude form, and open to improvement in detail; and, with regard to the stem, the one exhibited was made for use in a particular case. The makers had been desired to prepare several sizes, but he preferred the one shown because of its length, as a few strokes of a saw would reduce it to the required size. He considered that, to have rendered it possible to alter the position of the stem, was a point of much practical importance. It was not the use but the abuse, of intra-uterine pessaries which was mischievous. Dr. Donovan heard the death-knell of such pessaries, but he might assure Dr. Donovan that the bell was being tolled by those who did not understand their proper use. In answer to Dr. Stevens, he said he looked upon the ring as indispensable. He was extremely obliged to Dr. Cullingworth and Dr. Edis for their appreciative and friendly remarks.

REMOVAL OF THE UTERINE APPENDAGES.

By W. D. SPANTON, F.R.C.S.Ed.,

Surgeon to the North Staffordshire Infirmary.

CASE I.—Mrs. B., aged 29, living in Hanley, married nine years, had three children, the last about five years ago; no miscarriages. Since her last labour, she had “never felt quite the same”, having had more pain at the menstrual periods, and having been less apt for any exertion. In June last (24th) she was seized suddenly with a pain in the hypogastric region, which extended to the right inguinal and lumbar regions, and about a fortnight afterwards was exceedingly severe. She experienced similar, but less acute, pain in the left side. She was attended by Mr. Phillips, who described the attack as one of localised peritonitis, followed by typhoid symptoms, from which she very slowly and never completely recovered. I saw her in consultation on September 23rd, and found the right ovary very tender, and could distinguish a rounded hard swelling in connection with that organ, which felt like a distended Fallopian tube. On the left side, this could not be detected through the vagina. There was great tenderness on pressure in both inguinal regions. She had been many weeks in bed, and nothing seemed to afford relief to the constant pain. Her general health was rapidly failing, and we therefore advised removal of the uterine appendages, from which all the patient's troubles seemed to originate. The operation was performed on October 30th, 1882, by abdominal section, ether being administered by Mr. Phillips. It was well borne. Both ovaries and tubes were removed entire, though the right ovary was very firmly adherent, and the left contained a cyst of the size of a small orange. Silk ligatures were used for the pedicles; no other vessels required tying. Boroglyceride spray and dry gauze dressings were used; no sickness followed the operation.

On November 11th, slight metrostaxis came on, preceded by pain, which passed off soon afterwards. The highest temperature throughout was 100.2°, pulse 108. On November 12th, the wound was almost entirely healed, and all the sutures had been removed. Upon the 19th, she was feeling well, and quite free from the old pain; gaining flesh, and looking better than she has for a long time.

CASE II.—Mrs. T., aged 35, married, had five children, the last one four years ago, no miscarriages. Since her last confinement she has never felt as well as before, and, in February last, she had an attack of what was termed typhoid fever, but was probably one of localised peritonitis. From this she had suffered great pain ever since, and had been unfit for any duties. For some time past she has been confined to bed. No treatment had been of any real avail. The right ovary could be felt hard, and exquisitely tender to touch, and the left ovary could be felt enlarged but less tender. The uterus was normal; menstruation was irregular, frequent, and painful. She was admitted into the North Staffordshire Infirmary, and the operation performed on November 3rd, 1882, under boroglyceride spray. The left ovary contained a cyst the size of a small orange, quite free; the right ovary was adherent, indurated, and enlarged. The highest temperature after operation was 102°; and she made a good recovery.

CLINICAL MEMORANDA.

INCUBATION PERIOD OF TYPHUS FEVER.

LAST October, three isolated cases of typhus fever occurred in Stockton, there having been no other cases in the town either before or since. The disease was brought into the town from Sunderland, where it was then prevalent, by the first patient attacked, who had gone thither to see a relation who appears to have been suffering from the disease. The short history of these cases is as follows.

CASE I. J. C., male, aged about 35, went to Sunderland from Stockton on October 3rd. He returned on the 8th, and was taken ill on the 9th; so that, in his case, the greatest possible period of incubation was six days, supposing him to have taken the infection immediately on his arrival in Sunderland.

CASE II. His wife, who nursed him, sickened on the 12th, so that, in her case, the maximum period of incubation was three days.

CASE III. Mrs. A., living in the same yard, but in another house, had been in to see the previous patients on the 10th, and continued her visits till the 14th, after which she became alarmed, and did not go again. She became ill on the 17th; so that, in her case, the maximum period was seven days, and the minimum three days.

The first two cases were fatal, the third recovered. These three cases are interesting, first, as giving a period of incubation shorter than that usually assigned; but more so, as the last two emphatically refute Dr. Perry's dictum that “typhus is not contagious before the ninth day”. Murchison mentions this opinion, and states that he has rarely seen typhus contracted from a patient in the acute stage. I venture to add these two cases to the exceptions, which go to show that too great care cannot be taken, from the very first, in the isolation of patients suffering from this disease.

E. GORDON HULL, M.D.Dub.,

Diplomate in State Medicine, University of Dublin;
Medical Officer, Stockton Dispensary.

ON THE DETECTION OF THE BACILLI OF TUBERCLE IN THE BREATH OF CONSUMPTIVE PATIENTS.

By the following simple method, I have succeeded in demonstrating with facility the presence of the bacilli of tubercle in the breath of patients suffering from true tubercular consumption; for which purpose, I allow the patient to breathe, at frequent intervals during the day, through two thin sheets of pyroxylin, or fine cotton, one layer in front of the other, and both of which are placed in the outer compartment of an ordinary “pepper-duster” respirator. The layer of cotton, when so arranged, will act as a double filter, the external layer removing from the ingoing air all suspended particles, such as dust, micro-fungi, polur, starch, etc., which are always more or less present in it, and which it is desirable to exclude; that portion of cotton which has been next to the mouth at the same time retaining those only existing in the outgoing current, and which have been emitted from the lungs, viz., micrococci, bacilli, and some epithelial cells. It is in the latter layer only that I look for the organisms peculiar to this disease. This I do by converting the pyroxyline into gun-collodion by means of a mixture of ether and spirit. Every vestige of cotton-fibre is dissolved in the above menstruum, but other organic particles remain suspended in it. To render the bacilli manifest, my plan is to pour the thin collodion thus formed on a microscope-slide, and allow the fluid to run uniformly over the surface of the glass, then immediately placing the latter on one of its edges, that only the merest film of collodion may remain on the glass; the thinner the film produced, the more successful will be the experiment. The film is to be stained. This may be done by one of the methods well known to the profession for staining tuberculous sputum, such as that of Ehrlich or Heneage Gibbes. I have had excellent results from the former, for full details of which I refer to the last edition of Bristowe, in the Appendix. The latter method is described in the BRITISH MEDICAL JOURNAL of October 14th, 1882.

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SURGICAL MEMORANDA.

EPITHELIOMA.

THE three following cases of epithelial cancer, two of the lower lip and one of the cheek, may be interesting.

CASE I.—In January 1871, W. S., aged 74, a labourer, with epithelioma of the lower lip, came under my care. The history of the case was, that the disease had been twice removed by a good surgeon,