

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 transfusor 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 a-carides, 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 tannin 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, *ceteris 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 a 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 ante-flexion, 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

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