letter. It would be impossible to remove by main force persons suffering from fever; and the idea could not be entertained when such means would have to be resorted to in the case of the large numbers now electing to remain in their own dwellings. Many of these cases are reported to be in a pitiable condition, devoid of medical comforts, and, moreover, with very little nursing attention. This want is supplied in some measure by the District Nursing Institution, an admirable organisation founded by Mr. Rathbone, M.P. for Liverpool, who has taken the deepest interest in every measure calculated to benefit his fellow-townsmen of all classes. He wrote to report that the district nurses were overtaxed; and suggested that assistants should be provided at the expense of the Vestry, as the funds of their institution would not bear the strain. The Special Fever Committee agreed to recommend that a staff of assistants be placed under the superintendence of the district nurses, and this has been confirmed by the Vestry.

[To be continued.]

ON THE CONNECTION BETWEEN INFLAMMATORY CONDITIONS OF THE UTERUS AND ITS DISPLACEMENTS.*

By J. HENRY BENNET, M.D.

My intention in reading the present paper is, principally, to introduce an interesting and important subject for discussion to the Midwifery Section of the British Medical Association, the one embodied in the title which I have taken. I have nothing new to advance: my opinions are well known, and have been before the medical profession for more than a quarter of a century; at the same time, I am anxious to state that more extended experience, as years advance, has confirmed their correctness. Nor does it seem to me a work of supererogation to reproduce these opinions here, for antagonistic doctrines—erroneous doctrines, I firmly believe—are very rife, if I may judge by what I see in practice.

I have no intention in this paper to attempt even a sketch of the history of uterine displacements. It would take many times the fifteen minutes allowed me. I purpose to confine myself entirely to the consideration of the influence of inflammation in their production, laying down as a guide certain anatomical, physiological, and pathological data, which to me appear undeniable, and which, if conceded, must decide the question in the sense in which I decide it.

Anatomically, the uterus is not a fixed organ, like the liver or kidneys, bound down by ligaments, as is the former of these organs, and destined to spend its organic life *in situ*. On the contrary, it is a very moveable organ, of small size and light weight. In the healthy female who has had no children, it only weighs one ounce, or one ounce and a quarter; in the healthy female who has had children, it returns to an ounce and a quarter or an ounce and a half, after each confinement. Its means of sustentation are its ligaments—principally the lateral ligaments, the vagina, and the pressure of the surrounding organs. The support thus anatomically given admits of considerable mobility, especially in an antero-posterior and in a vertical sense, as may be ascertained by a digital examination. The healthy juvenile womb may be pressed by the finger, with ease, into all but any part of the pelvic cavity; indeed, the uterus swings in the pelvic cavity like the body in a hammock, suspended between the lateral ligaments. The healthiest uterus in the healthiest woman is lower at night—probably half an inch—than it was when she gets up in the morning, through mere gravity.

Physiologically, this extreme anatomical mobility of the uterus is an absolute necessity. When the bladder is full the uterus must give way, be pushed back posteriorly, sometimes to an extreme extent. The digital examination of a woman whose bladder is full of urine demonstrates this fact. On the other hand, when the rectum is loaded, the uterus must give way anteriorly, be pushed forwards: the laxity of the lateral ligaments and their stretching capacity render this possible. Thus physiological retroversion and anteversion of the uterus constantly take place under these influences. In pregnancy, the enlarged uterus rises and leaves the pelvic cavity, showing how elastic and ductile the uterine ligaments are to physiological changes. The slight descent or lowering of the entire uterus in the vagina, after the day's walking or standing, may be said to be an illustration of physiological prolapsus.

Pathologically, the uterus presents a peculiarity which pertains to it individually, or which is at least more marked in it than in any other organ of the body. It enlarges more rapidly and more permanently under the influence of inflammation, or indeed of any morbid stimulus,

than any other organ. This morbid peculiarity is connected with its physiological duties and power. Twenty times or more in a woman's life the uterus may enlarge, under the physiological stimulus of pregnancy, from an ounce and a half to thirty ounces or more in the course of nine months; and then, in four or six weeks, go down again to an ounce and a quarter or an ounce and a half. A very slight amount of inflammatory mischief in the entire uterus, or in a limited region, may enlarge it, increasing its weight in the non-pregnant woman, or may prevent entire reduction after delivery. I long weighed the uterus of all women examined in the dead-room, and never found the weight anatomical when there was any inflammatory lesion, or indeed any morbid condition, fibrous tumour, mucous polypus, or cancerous deposit. The uterus responds to the slightest stimulus, increasing gradually; or after pregnancy it refuses, under morbid stimulus, to descend to the normal size and weight, stopping at eight, six, four, three, two, ounces.

This pathological enlargement is often the result of localised inflammatory conditions, and may be then limited to one region of the uterus. Thus the fundus may be the seat of enlargement, and, less frequently the anterior region, or the cervix alone.

In all these cases the enlargement and increased weight of a physiologically moveable organ like the uterus is followed, inevitably, by displacements. The direction in which the displacement takes place depends on the region of the uterus enlarged. If the entire uterus be uniformly enlarged, the displacement is generally vertical; the uterus falls in prolapsus. If it be, as often happens, the fundus that is enlarged, we have retroversion; if the anterior region, anteversion. I would remark, however, that in my opinion anteversion of the body of the uterus is, generally, in married women, the result of coitus, which drives the cervix into the sacrum, and, acting as a lever on the entire organ, throws the body forward. In unmarried women, and in women generally who have had no children, anteversion is often the result of general inflammatory enlargement of the uterus, and of the exaggeration of the normal and congenital crescent curvature of the uterus, which I was the first to discover and point out. An American pathologist has recently made a beautiful experiment illustrating this congenital curvature. He froze the pelvis of several young females, and, on making a section, found the virgin uterus curved with anterior concavity, as I described it many years ago.

If the above facts are admitted, the therapeutical deductions are obvious and undeniable. In any case of uterine displacement, the first thing to do is to ascertain whether the uterus is enlarged, and whether there is any inflammatory or other lesion present which can have produced the enlargement, or which can have prevented the normal reduction after delivery. If such morbid condition exist, it should first be treated, and cured, if possible, whether it be general, localised, or internal metritis, laceration of the cervix, mucous membrane disease, or polypus. That accomplished, Nature alone, under favourable circumstances, with a due allowance of time, will do the rest, fining down the uterus to its natural size; and that attained, the organ will, generally, regain its natural position of itself, like a letter-weight from which the weight is removed. If it does not, moderate pressure from an uninflamed organ seldom positively requires treatment, as it seldom gives pain or annoyance. I know hundreds of women whose uteri are not physiologically *in situ*, but who know it not, and have no uneasiness. If, however, the displacement persists, from other causes which I have not enumerated, and is a source of discomfort or prejudice, it may then be judiciously treated by mechanical agents, pessaries, etc. Such, however, is not the course usually followed. Other doctrines prevail—doctrines which, although clearly erroneous, are sanctioned by great names both at home and abroad. Uterine displacements are too much studied *per se*, independently of the inflammatory lesions which so often produce them. The uterus seems to be considered, like the elbow or knee-joint, as capable of being dislocated backwards or forwards to one side or the other, and as thus capable of mechanical replacement, a doctrine utterly at variance with the anatomical and physiological facts that I have brought forward. As a practitioner, ever since I have been in practice, I have constantly had to take pessaries out of the vaginas of women with more or less severe inflammatory lesions of the uterus, in whom they ought never to have been inserted, at least not until they were cured of these lesions.

Nor is this surprising. In my youth, in 1837, thirty-three years ago, I was clinical clerk for a year to Velpeau at La Charité in Paris. He then paid great attention to uterine diseases, and had his female-ward half-full of women thus suffering. During that year, I consider that I learnt nothing tangible or useful about uterine pathology from my valued master and friend. It was all anteversion, retroversion, and prolapsus. We never studied and fathomed the cases, and did no real good. Later, at La Pitié, under Lisfranc and Gendrin, I had to unlearn what Velpeau

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had taught me, and then I began to see that in most instances that displacement is merely a symptom. I continued the friend of Velpeau to the day of his death, but he never got much further in uterine pathology; and, when I broached the subject, used to shake his head, and say in his amiable, jocose way, "Don't let us talk about it; you are a deserter from my flag; you have gone over to the enemy, and deserve punishment". Velpeau's influence, however, in this question, has been great and pernicious on the Continent.

At home, in 1843 I believe, our lamented colleague and friend, Sir James Simpson, published in the *Dublin Medical Journal* a paper on uterine displacements, in which he adopted pretty nearly the same views as Velpeau—those of what I call "the mechanical school". A year or two later, in 1845, he called on me in London, and said that he had procured my recently published work on uterine inflammation, had read it twice through carefully, on his way to town, and, on his return home, would examine into all the questions I raised. I subsequently heard from him that he had found my descriptions of disease clinically correct. The influence, however, of former views remained powerful in his mind throughout his life; and I found his practice uncertain in this respect. Sometimes he had cleared up those of his cases which I subsequently saw, as regards inflammatory conditions, and sometimes he had not, seeing nothing but the displacement, even when decided lesions existed. I have never before alluded to the opinions of my departed friends: I now do so with all esteem and affection; but they are gone from us; the doctrines which they held are become a part of the history of the profession, and as such they may be alluded to and criticised without disrespect to their memory.

In conclusion, I would recapitulate the views I have endeavoured to express in the following terms.

1. I consider that, under the influence of mechanical doctrines pushed to an extreme, uterine displacements are by many too much studied *per se*, independently of the inflammatory and other lesions that complicate and often occasion them.

2. That the examinations made to ascertain the existence of inflammatory complications are often not made with sufficient care and minuteness, as evidenced by the fact that I constantly see cases in practice in which inflammatory lesions have been neglected entirely, and in which the secondary displacements have been alone studied and treated.

3. That inflammatory lesions are often the principal cause of uterine displacement through the enlargement and increased weight of the uterus or of a portion of its tissues which it occasions.

4. That when such inflammatory conditions do exist, as a rule they should be treated and cured, and then time should be given to Nature to absorb and reduce hypertrophied and engorged tissues before mechanical means of treatment are resorted to.

5. That the relief from the sensation of bearing down which pessaries and bandages give is no real criterion of their being the proper means to use, such relief being often felt when there are inflammatory lesions present, which their presence aggravates.

6. The above statements must not be considered in any way to imply that I do not recognise other causes of displacement of a non-inflammatory nature, such as laxity of ligaments and soft parts, wide pelvis, laceration of perinæum, severe shocks, etc.

ON INTERMITTENT TETANY.

By C. CURRIE RITCHIE, M.D.,
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It is remarkable that this affection should have so long escaped recognition by the English profession, especially as it must be by no means uncommon. No mention is made of it in any English treatise on systematic medicine that I have seen, nor does it appear in the *Nomenclature of Diseases* issued by the Royal College of Physicians.

It is probable that spasmodic contractions of muscles have long been observed and classed with other affections of a convulsive character, but it was not till Dance published his "Observations on a form of Intermittent Tetanus", in 1831, that special attention was directed to the well-marked group of phenomena constituting the disease now known as intermittent tetany. Trousseau, in his *Lectures on Clinical Medicine* (New Sydenham Society's translation, Lecture xiii), gives a most admirable account, historical and clinical, of this affection, which first received the name "tetany" from Dr. Lucien Corvisart, in 1852.

As professional interest in the subject has been revived by the publication of a case with clinical remarks by Dr. Wilks (*BRITISH MEDICAL JOURNAL*, 11th June, 1870), I have ventured to record the following cases which have come under my observation within the last two years.

CASE I.—Mrs. M., aged 28, sent for me on 28th August, 1868. She had three children, and was about the seventh month of her fourth pregnancy. She had suckled her youngest child for sixteen months, during the latter five of which she had suffered from profuse menorrhagia. Four months ago, she began to have severe headaches and pain darting down the back, accompanied by painful contractions of the hands and feet, which prevented her from attending to her household work. These attacks came on at first every three or four days, each lasting about two hours; latterly, the attacks had become more frequent. Ten days ago, the weather being very cold and wet, diarrhoea came on, which had weakened her very much. On receiving some unpleasant news, the morning I saw her (28th August), she had "fainted"; immediately afterwards, however, on regaining consciousness, she found her "whole body twitching" so that she was unable to sit quietly, or to use her limbs. She had to be undressed and put to bed. When I saw her about 11 A.M., she was sitting propped up in bed, her expression evincing great anxiety. There was twitching of the muscles of the face, and drawing together of the lips, interfering with articulation; the fingers were rigidly fixed in a semiflexed position, with the thumb forcibly drawn across the palm; the wrists were semiflexed. The toes were also incurved, the dorsum of the foot being highly arched, and the muscles of the calf hard and tense. The fingers and toes could not be straightened; she had a feeling of numbness in them. Her mental powers were unimpaired; pulse 108, temperature 99.2° Fahr. I put her under the influence of chloroform, and was then able to straighten the fingers and toes; they again became rigidly contracted when the anæsthetic was withdrawn. She was ordered ten grains of bromide of potassium, to be taken every half hour; and at my evening visit (7 P.M.), I found the contractions less marked, and the pain diminished. I ordered the bromide to be taken three times a day. The contractions gradually ceased; the patient remained free from them after the evening of the 31st August. She was confined on November 2nd. As she felt weak, I recommended her not to nurse her child, and ordered her citrate of quinine and iron, with cod-liver oil. When I last saw her (August 1869), she told me that she had had no return of the contractions, and now enjoyed perfect health.

CASE II.—Mrs. A., aged 34, was delivered of her sixth child on March 27th, 1870; the labour was natural, with the exception of slight atony of the uterus. She made a good recovery, and remained well till the end of April, when she began to suffer from severe headache after each act of suckling her child. A few weeks afterwards, she began to have "flickering" feelings all over her body, which amounted to a kind of numbness in her hands. Her sense of touch became impaired, so that she felt as if she constantly wore a pair of thick woollen gloves. She stated that "she had let several articles of crockery slip out of her fingers" from this cause. I saw her on June 3rd. For several days she had been suffering from painful contractions of the hands and feet immediately on getting out of bed every morning. At 4 A.M. on June 3rd, she was seized with severe pain in the back, and cramps of the limbs; the feet were arched. I saw her at 10 A.M.; her condition was as follows. She had a sallow, cachectic appearance; there was slight muscular twitching of the face and eyelids; speech not affected; mind clear. The fingers were semiflexed and perfectly rigid; the thumbs drawn across the palms, abduction and extension causing great pain; muscles of the forearm hard and tense; upper arm natural, with the exception of slight contraction of the biceps. The muscles of the calf were so tense that they felt to the touch like pieces of wood. The heel was drawn up and the toes incurved. The pain in the legs and feet was very great, and was accompanied by a tingling sensation. Previously to my seeing the patient, continuous friction of the legs and feet had been kept up for about three-quarters of an hour, without any intermission of the contractions. Immersion of the limbs in cold water had no effect; cold water bandages were then applied, which somewhat relaxed the spasms, and afforded relief to the patient. She sent for me again, however, about 2 P.M., as the contractions were as bad as ever. Ether spray was then applied to the feet, which almost immediately stopped the contractions; they were readily reinduced on compressing the limb below the knee with both hands, but ceased on reapplying the spray. At 8 P.M., there had been no return of the cramps; half a drachm of chloral hydrate was then administered. She had a good night's rest, but had two slight attacks next morning, June 4th; to continue the chloral three times a day. On June 8th, she was quite free from the contractions and pain; a mixture containing the ammonio-citrate of iron with infusion of calumba was substituted for the chloral. I saw her on July 15th, previously to her leaving Manchester; she was much improved in appearance, and felt perfectly well.

CASE III.—M. C., a strumous-looking boy of 13, used to have "working fits", according to his mother's statement, when he was about three or four years old; his face and mouth were drawn to one side;