A CASE OF ARRESTED DEVELOPMENT IN ONE ARM, THE RESULT OF INFANTILE PARALYSIS: GROUPING OF THE AFFECTED MUSCLES.

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I AM indebted to my friend Mr. Manley of West Bromwich for an opportunity of examining the following case. It possesses a twofold interest. In the first place, it exemplifies one of the multiform varieties of that singular disease—infantile paralysis—a disease which is distinguished by the variety it exhibits in its manifestations. This variety seems to be mainly derived from the tendency of the malady to affect a smaller tract of the nervous centres than is the case in the paralysis of later years, and thus to paralyse a more limited number of muscles, often only a single group, although it is by no means incapable of giving rise to hemiplegia or paraplegia, as met with at any age of life. Whatever be the means by which infantile paralysis is produced, it appears to possess the faculty of mapping out particular districts of the nervous centres with remarkable precision, and thus enables us to picture to ourselves these same districts as possibly existing in the adult brain or cord; in this particular, the disease has special interest in relation to nervous disease in general. Moreover, as the disease happens during the time when the body is forming, it is liable to exert a very injurious influence over the process of development in the injured muscles; and when an important district of the body is affected—as, for instance, some one of the limbs—it may leave that part stunted in its growth. In my present case, this evil consequence is displayed very manifestly; not only the muscles, but the bony tissues also, having suffered materially. But there is also another point of interest in the case: it exemplifies a tendency, which is noted in certain instances of nervous disease, to affect particular parts of the body not so much according to anatomical connection as according to functional association. This tendency is, indeed, but a copy of what is observed in many of the normal acts of the body; but in disease we occasionally meet with interesting exemplifications which bring into clearer light certain functional relations perhaps not always fully recognised. Such is the case in that remarkable disease labio-glosso-laryngeal paralysis; in wry neck also, and in certain choreas and epilepsies. There are some very interesting remarks upon this subject by Dr. Wilks in the present number of *Guy's Hospital Reports*, suggested by the first of the diseases I have just cited in illustration. In this disease, moreover, the grouping to which I have referred is indicated not only by the arrangement of positive symptoms, but also by the occurrence of certain negative symptoms; for, whilst the muscles of the glottis are paralysed in all efforts at vocalising, together with the muscles of the tongue and lips which minister to vocalisation, these same muscles yet retain their power in those movements of the glottis which are subservient to respiration, the other respiratory muscles not being implicated in the morbid process. In my present case something of the same kind had also occurred.

In this case, the arrest of development affected to a proportionate extent the upper arm, and all the parts, both muscles and bones, which are associated in office with that portion of the upper extremity; but, as regards the forearm, its structures are comparatively spared. So far as the forearm has a certain association in function with the upper arm, so has it shared to a certain degree in its misfortune; but inasmuch as it is employed about totally different work, in performing the complicated movements of the hands, it has escaped to a very considerable degree. The contrast between these two portions of the limb was most striking. Whilst the upper arm was reduced to a mere rod, the forearm was plump and perfectly useful; no one, indeed, would have suspected its development to be otherwise than complete until he had compared it with the corresponding member on the other side, which had probably undergone hypernutrition from extra work thrown upon it.

M. D., aged 24, a very healthy, well-made young woman, with healthy front teeth, who had always enjoyed good health, had a fit when nine months old, and the right shoulder has remained partially paralysed ever since. No other information is attainable respecting the origin of the disease. The right upper arm presents the utmost amount of attenuation; the muscles of the shoulder, the deltoid, and the scapular muscles are very small. The great pectoral and the latissimus dorsi participate to a full extent. The degree to which these latter muscles have suffered is very apparent in the boundaries of the axillary cavity. The tendon of the great pectoral is greatly attenuated; those of the teres major and latissimus can hardly be said to exist; and the outline of the head of the humerus is so clearly mapped out beneath the skin, posteriorly, as to suggest the fear of spontaneous luxation, an accident, however, which has never occurred. The right scapula seems not more than half the size of its fellow, though it has preserved its normal shape and the proportion

of its different parts; the clavicle is shortened, but I cannot make out that it is thinner than the opposite bone; the humerus has its natural length, but in thickness is a mere rod. I have not made a note of the state of sensation, but I am confident I found it natural. The forearm is plump and well nourished, though I found it one inch less in circumference than the opposite arm, which is remarkably muscular. The fingers of the hand are more slender than their opposite brethren. I took the following measurements. A tape carried round the upper part of the chest, so as to include the tendons of the pectoral and teres, gave a diminished girth on the right side of two inches-and-a-half; at the base of the chest the two sides were equal. The right scapula, from spine to apex, was one inch short; from the base to the top of the acromion, also, one inch short. The clavicle was short by three-quarters of an inch. The length of the humerus was normal; the breadth of the condyles less by five-eighths of an inch; the girth of the wrists less by three-quarters of an inch. The breadth of the hands was alike, but the right fingers were more slender than the left. The lower extremity is perfectly healthy. She uses the arm for simple purposes, but cannot raise a weight. The forearm, however, is perfectly useful for every purpose for which it is required. She sews well, but has never learned to write.

ON CERTAIN POINTS IN THE PATHOLOGY AND TREATMENT OF GONORRHOEA.

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OF what might be termed, in point of importance, the secondary diseases of the human body, there are few, if any, whose complications and sequences occasion so much trouble to the practitioner, and so much mental worry to the patient, as the one under consideration. The speedy and effectual cure of this malady is, therefore, much desiderated.

In contradiction to one of the most recent writers on this subject—viz., Dr. Watson of Edinburgh—I submit what I always understood till recently to be the generally received opinion, that, like all other mucous surfaces of the body, the urethra is at times the seat of a specific, and at times of a non-specific, inflammation; and this is a point which in practice it is neither charitable nor expedient to overlook or ignore. This error, however, as I conceive it to be, frequently misleads; and a purulent discharge from the urethra, because it comes from the urethra, is unhesitatingly pronounced to be specific gonorrhoea. Of the non-specific forms of superficial inflammation of the penis, may be mentioned, in the first place, balanitis simplex, due to irritation of sebaceous matter, usually under a long prepuce, or to any other irritation, and frequently found in boys, in whose case the suspicion of a specific element could not be entertained. While non-specific inflammation may thus exist upon the glans, we find that it may spread by contiguity to the urethra, and give rise to blennorrhoea simplex,* on the one hand; or this may be occasioned, on the other, by venereal excesses, inordinate indulgence in spirits, violent exercise, or urinary irritation, in conjunction with the rheumatic or gouty diathesis; or, what it is of much moment to bear in mind, by leucorrhoea in a perfectly chaste and virtuous female.

I admit the extreme difficulty—nay, perhaps, the impossibility—of distinguishing between a specific gonorrhoea and this condition, when the existence of leucorrhoea in the female is admitted or discovered; and, under ordinary circumstances, the benefit of the doubt should be extended to the accused.

With these preliminary remarks, I return to some of the views reproduced by Dr. Watson—for his pamphlet is professedly a review—and, lest I should be supposed to have misunderstood him, I quote the following: "The next question requiring solution was, whether or not a gonorrhoeal discharge required a specific virus for its production, as we have seen was maintained by Benjamin Bell. Investigation and observation have served to prove that any irritant which suffices to set up inflammation of any other mucous membrane is quite capable, when introduced into the urethra, of exciting a gonorrhoeal discharge; that in fact any irritant, whether chemical, physical, or vital, is quite sufficient to give rise to a gonorrhoea, and that the majority of females who communicate gonorrhoea do not suffer from it themselves." I opine that the majority of readers will be likely to adhere to the view of Benjamin Bell. What Dr. Watson can mean by a *vital* irritant to the urethral surface, I confess my inability to comprehend. It is perfectly clear, however, from the foregoing passage, that, apart from what is generally understood by a specific gonorrhoea, simple urethritis can have no existence, according to Dr. Watson; and to reconcile this peculiarity on

* The term blennorrhoea (βλεννα, ῥεω) is decidedly preferable to gonorrhoea, which is a misnomer (γονος, ῥεω), synonymous with spermatorrhoea.