ADDRESS

ON

SOME OF THE CONDITIONS INCLUDED
UNDER THE GENERAL TERM
"RHEUMATOID ARTHRITIS".*By WILLIAM M. ORD, M.D.Lond., F.R.C.P.,
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WHEN a disease is found to be treated of under many different names, when each successive student of it finds reason to give a new descriptive term to the assemblage of phenomena as he is led to see them, we may safely conclude either that, in fact, more than one form of morbid process, or more than one kind of clinical history, is involved. In other words, a plurality of genera has been taken for one, or one genus comprehending several species has so far only received an imperfect analysis.

The joint-affection to which I propose to direct your attention to-day appears to me certainly to come under the second category, not improbably under the first. For I find that the disease called by Dr. Garrod "Rheumatoid Arthritis" has been called "Digitorum nodi" (Heberden, 1788), "Nodosity of the Joints" (Haygarth, 1805), "Usure des Cartilages articulaires" (Cruveilhier: *Anat. Pathologique*), "Rheumatic Gout" (Brodie, Fuller, Aitken), "Chronic Rheumatism of the Joints" (Todd), "Chronic Rheumatic Arthritis" (Adams of Dublin), "Rhumatisme Nouveau" (Trousseau and other French writers), "Arthrite sèche ou déformante" (Follin and Duplay, and others), "Arthritis Myelitica" (Remak); while a variety of it has received from Smith of Dublin the name of "Morbus Coxæ Senilis". At the present time, the term generally recognised by the public is "Rheumatic Gout"; and, though "Rheumatoid Arthritis" is a nearer approach to accurate naming, the former term is perhaps most commonly used by the medical profession in speaking of the disease to their patients.

A definition of rheumatoid arthritis being required, may be stated as follows: a persistent or progressive inflammation of one or more joints, in origin neither rheumatic, nor gouty, nor scrofulous, nor in any way specific; which has for results atrophic changes in articular cartilages and articular ends of bone, and hypertrophic changes in synovial membrane and adjoining periosteum and cartilage.

The present paper having for its object a discussion of rheumatoid arthritis from a clinical standpoint, I shall refer to the morbid anatomy of the disease only so far as is necessary to ensure a distinct understanding between me and my audience as to the identity of the condition to be so discussed.

The painful, swollen, hardened, knotted, and, in various degrees, stiffened or partially dislocated joints, standing in prominent contrast with the unaffected shafts of the limbs, and unaccompanied by tophaceous deposits, form, when their chronic and progressive history is learned, the first means of identification. With these external appearances are associated, internally, successive stages of softening, fibrillation, and absorption of the cartilage tipping the articular ends of the bone; of wearing-down and eburnation of the denuded bone; of effusion within the synovial capsule; of thickening of synovial membrane and its fringes, with the formation of floating bodies; of hypertrophy of the cartilage around the margins of the articulation and of the adjoining periosteum, giving rise to new bony formations, which broaden the articular surface in a remarkable way, at the same time that the central portion of that surface is being worn down, the dislocations tending to ensue on the loss of tissue in the centre being to a great extent averted by this extension of the periphery. The condition thus briefly epitomised is held to be distinguished from chronic rheumatism by the fact that very little obvious morbid change accompanies that process; from gout by the absence of deposits of urates, either within the joint or in other parts of the body. The actual morbid condition is common to several diseases which, as well as receiving distinct names, are held to be of distinct nature. It is common to the "arthropathie des ataxiques" of Charcot, to gonorrhœal rheumatism, to urethral rheumatism, and to what is called rheumatic arthritis, including both the polyarthroses and the monarthroses (such as the morbus coxæ senilis) of that disease, while it forms a part of the changes induced in joints by morbid growths and deposits. And, admitting the separate existence both of Charcot's arthropathie and of urethral rheumatism, while regarding gonorrhœal

rheumatism as a subordinate variety of the latter, I wish to separate from the remaining group a class of cases having a marked common causal relation, to which I propose to give the name of hystero-arthritis. Subsequently, I shall propose a modification of the nomenclature of the comprehensions of "rheumatoid arthritis". Before reaching this point, I must ask you to follow me in a short examination of Charcot's "arthropathie des ataxiques". That distinguished clinical observer has demonstrated that, in at least ten per cent. of his cases of locomotor ataxy, an affection of joints has occurred, usually of the knee in early stages, of the shoulder in later stages, of the disease; that, in the beginning, enormous, not painful, swelling of the joint occurs; that, in a certain number of cases, this passes off, and therefore has existence, so to speak, only as a harbinger of the greater malady; that however, in a certain proportion of the cases, the joint continues swollen, at the same time that the muscles of the corresponding limb undergo some amount of wasting; and that, finally, the joint thus chronically affected is subject to spontaneous dislocation. The morbid anatomy of the joints is, in its elements, that of chronic rheumatoid arthritis, but with the atrophic processes intensified, and the hypertrophic processes much diminished. I here exhibit a preparation of Professor Charcot's in comparison with a specimen from the museum of St. Thomas's Hospital—one of those which formed the basis of Mr. William Adams's admirable analysis of the morbid anatomy of rheumatic arthritis, contained in the third volume of the *Transactions of the Pathological Society of London* (1851). It will, I contend, be readily seen that the processes are identical in character, though differing in quantity.

M. Charcot, as is well known, first connects the arthropathy with the ataxy; and, secondly, traces its occurrence to extension of the spinal affection from the posterior columns to the grey matter, in particular the grey matter of the anterior horns. Observing that the conclusion is now generally accepted, I may further remind you that joint-affections of both chronic and acute kinds have been observed frequently among the results of nerve-lesion, more particularly of lesions involving the grey motor tracts, in company with sloughings of skin, herpes, smooth skin, rapid muscular atrophy, and other like trophic troubles (Charcot, Weir Mitchell).

Upon this basis, I take the first step in my analysis of relations: that local lesions, identical in their nature with those of rheumatoid arthritis, may occur as temporary phenomena in the early stage of locomotor ataxy, apparently in relation with temporary affection of the grey matter of the cord forming a part of the prodromata of that disease; that such lesions may become permanent, progressive, and rapidly destructive in connection with spread of sclerosis from the posterior columns to the anterior horns of the grey matter.

The next step rests upon the relations of arthritis to gonorrhœa and urethritis. An arthritis having the local morbid anatomy of that which we are discussing is sometimes found in association with gonorrhœa. The joint-affection comes on usually at a certain period of the urethral affection, often in company with ophthalmia or scleritis; it usually slowly resolves after a single attack of gonorrhœa, but is afterwards easily provoked afresh by new attacks of gonorrhœa or by simple urethritis (Elliotson, Brodie, Fuller). The joint-affection sometimes alternates with the gonorrhœal flow, sometimes both go on together. It tends to localise itself, particularly in the knee and ankles. It is especially persistent and obstinate when thus localised, leading often to white swelling or ankylosis. The affection is only seen in males. Ricord, who calls it "blennorrhagic arthritis", says that the only real difference between this form of arthritis and all the others is to be found in the cause which gives rise to it.

Gonorrhœal rheumatism thus characterised has generally been attributed to some specific infection of the system from the part. Fuller, after having produced evidence to show that such a rheumatism may be associated with urethral discharges not venereal, declares gonorrhœal rheumatism to be "a disease *sui generis*, engendered by a specific poison, and requiring a special mode of treatment".

It appears to me, after returning frequently to the consideration of the circumstances, that gonorrhœal rheumatism, instead of being a matter of infection of the blood, is produced by reflex nervous influence. That it is not a matter of infection, is to be argued from its occurrence in relation to non-specific or simple urethritis. Dr. Fuller, whose writings are strongly tinged with the doctrines of the humoral pathology, is an authority in favour of such a relation. He cites, in particular, a case in which a rheumatoid arthritis was established "shortly after the appearance of a slight gleet discharge, which, as far as I could ascertain, was excited solely by excessive sexual intercourse, and an undue amount of alcoholic stimulants". Dr. Elliotson (*Medical Times and Gazette*, vol. i, 1860, p. 642) has given evidence to the same effect, with citation of cases. He gives, as he says, excellent "reasons for regarding as simple urethral rheumatism, ophthalmia, and scleritis

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what are usually regarded as gonorrhoeal rheumatism, ophthalmia, and scleritis".

Sir Benjamin Brodie, in his work on *Diseases of the Joints* (5th edition, 1850, p. 42, *et seq.*), relates one or two cases of gonorrhoeal rheumatism, and also cases of rheumatism accompanying simple urethritis, purulent ophthalmia, and scleritis. He also gives an account of a patient labouring under stricture of the urethra, who had four attacks of rheumatic inflammation and ophthalmia. Two of the attacks were attributed by the patient to gonorrhoeal infection, two to the use of the bougie.

It is clear that, in proportion as simple urethritis is admitted to be a cause of such arthritis as may be produced by a specific urethritis, the idea of the production of the gonorrhoeal arthritis by a specific poison acting through the blood loses value. If, for the quantity thus diminished, reflex nervous influence be substituted, the explanation, as I would submit, is much more agreeable with the facts.

Here I must ask you to stop for a moment and contemplate another phenomenon of undoubted urethral causation—that of reflex paraplegia, as named by Brown-Séquard. An urethral irritation, most often dependent on a stricture, is so joined with a paraplegia or paresis of the lower limbs, as to make it probable that the stricture is a cause of which the paralysis is an effect. The paralysis can sometimes be traced to a myelitis of the lower dorsal part of the cord, sometimes to affections of nerves; but, in the most typical cases, signs of myelitis are wanting, and the *post mortem* examinations in such instances have failed to demonstrate any lesion of the cord. The condition was recognised originally by Stanley, and has since been discussed by Brown-Séquard, Gull, Leroy d'Étiolles, and Charcot, the latter of whom asserts that the conjunction of paraplegia with urethral irritation was known to Troja in the last century (1780). The reflex paraplegia sets in usually a short time after the beginning of the urethral excitement, is subject to many fluctuations, and is cured by the cure of the urethral mischief.

We now have before us urethral irritation in the male producing, just as we have before found spinal affection producing, in certain cases and under certain not as yet well defined conditions, either a paralysis or an arthritis. The urethral irritations give rise, by reflex action, to what the spinal affection appears to induce by direct action. The lesion of the joints is essentially the same in both cases, and cannot be anatomically separated from the lesions of rheumatoid arthritis.

I have mentioned that gonorrhoeal rheumatism is an affection of males. Elliotson has tried to explain this by comparing the frequency of gonorrhoea in males with its much inferior frequency in females, loose females being infinitely fewer than loose males, and one infected female being certain to infect a disproportionately large number of males. This argument does not commend itself to my judgment. I recognise in the difference of the parts affected in the two cases a much more acceptable explanation. The extent, importance, and sensitiveness of the surfaces and structures involved by general urethritis in the male overbalance so immeasurably the gravity of the conditions in general urethritis of the female, that, if gonorrhoea in the female is an urethritis, as it sometimes is, no one need wonder that it does not produce similar severe remote effects. And granting that ordinary gonorrhoea affects the lower part of the vagina, or even the whole of that passage, no structures like those in the prostatic urethra are concerned. It is, in my opinion, the excitement of the prostatic urethra, endowed to receive and respond to nervous sensations at once voluminous and intense, related with the occurrence of vivid reflex actions in gland-tubes and vessels, that throws upon the spinal cord those powerful impulses whose reflections we are considering. And it is only when we deal with the uterus, and, perhaps, the ovaries, that we find in the female structures of equal—here, perhaps, of greater—power of perturbation. As physiologists, we may, indeed, be reminded that, in the uterus and Fallopian tubes, we have the anatomical homologues of the vesicula prostatica.

The immediate object of my argument to-day is to show that the uterine organs do very commonly produce an arthritis comparable to the arthritis associated with the gonorrhoea or simple urethritis of males, though mostly different in its distribution. This argument has been suggested to me by the clinical consideration of a number of cases of rheumatoid arthritis occurring in women. In a case which was under my care ten years ago, the association of severe arthritis with severe dysmenorrhoea was indicated so pointedly as to put it out of the class of coincidences. The affection of the joints, although persistent, was regularly developed in paroxysms immediately before, throughout, and for a short time after, each menstruation, and as regularly remitted in the intervals. The first idea—that a common rheumatic inflammation affected joints and ovario-uterine organs—failed to account for the ~~paroxysmal~~ character of the arthritic attacks, and for their coincidence

with menstruation. After much treatment had been ineffectually applied on the primary rheumatic hypothesis, the uterine conditions were carefully and steadily attacked for a twelvemonth. At the end of that time, the dysmenorrhoea was overcome, and the rheumatic paroxysms soon afterwards ceased to occur. The patient, whose life had become a burden, who was wasted, sallow, anæmic, and hysterical, is now an active, happy, and decidedly well-nourished member of society, though of course retaining some deformity of the joints.

Haygarth, in his *Clinical History of the Nodosity of the Joints* (1805), states that he had seen thirty-three cases of that condition, all in women. He regards the affection as peculiar to women, and as belonging to the climacteric and subsequent periods of their life. Only three out of his thirty-three cases had the "nodes" during the period of regular menstruation. Of these, two appeared to be between thirty and forty years of age; the third had suffered twelve abortions. In all, the fingers were chiefly affected. Haygarth separated this affection as "nodosity of joints" from "rheumatic gout", a term already in use when he wrote; and he considered it to be chiefly a disease of the middle and higher classes.

Curiously enough, when I analyse my note-book, I find records of just the same number of cases, not of nodosity of the joints simply, but of rheumatoid arthritis combined with decided symptoms of uterine disorder or irritation. I exclude from the list cases in which there was evidence of uratic deposits, and cases in which no known uterine complication existed, though both classes must be discussed later on, as forming chapters of the history of arthritis.

Of the thirty-three, twenty-six belonged to the middle and upper classes, most to the former, the remaining nine to the poorer classes; seventeen were unmarried, thirteen were married, three were widows.

As regards age, ten were between 20 and 30 years; eleven were between 30 and 40; nine were between 40 and 50; and three were between 50 and 60.

The indications of ovario-uterine complication in the several cases were, marked irregularity of catamenia in two; catamenial flow simply in excess in one; catamenial flow very scanty in one; catamenia irregular, with excess in two; catamenia recently disappeared in four; catamenia recently reappeared after apparent cessation, the reappearance coinciding with arthritic attack, in two; dysmenorrhoea with excess in eight; dysmenorrhoea with deficiency in four; constitutional symptoms of climacteric present in two; fibroid of uterus, with menorrhagia, but not dysmenorrhoea in one; catamenia regular, relieving pain present at other times in sacral region, in one; catamenia excessive with leucorrhoea in one; profuse leucorrhoea in woman married several years without pregnancy, one; woman married several years without pregnancy, one; case in which arthritis occurred on two occasions a week before parturition, these being the only pregnancies, one; climacteric long passed, arthritis began then and has since continued, one.

In four of the above cases, ovaritis existed; and it is important to notice, first, that amenorrhoea is not noted in any case; second, that the conditions are mainly such as would involve hyperæmia of the internal genital organs; third, that marked dysmenorrhoea is noted in twelve, or more than one-third of the total number.

The seat of arthritis was various. It affected the hands alone in thirteen cases; the hands and wrists in three; the hands, wrists, and elbows in three; the upper extremities in one; the right hand only in one; the right hand and wrist in one; the hands and feet in one; the hands, feet, and knees, in one; the knees and ankles in one; both extremities in six; both extremities on one side in one; the ankle and tendo Achillis in one.

From this, it appears that the hands were more often affected than any other parts; the metacarpo-phalangeal joints, being of all joints the most obnoxious to this form of arthritis. The hands, besides being alone attacked in the cases, shared the affection with other joints, and principally with other joints of the upper extremity, the wrists especially, in all the rest of the cases, except two. In three of the cases, where the affection was limited to one side of the body, or, having begun, continued excessive on one side, there were ovarian pain and tenderness on the same side, and a distinct frequency of neuralgia on the same side.

An inspection of the cases brings out further most interesting relations. Not only did the arthritis coincide with ovario-uterine affection, but, in a considerable proportion of the cases, paroxysms of arthritis coincided with menstrual periods. This sort of parallel march was noted in fourteen cases, in one of which arthritis preceded menstruation as its regular herald; in seven, arthritis regularly accompanied; in two, it followed; in two, it both accompanied and followed; and in two, arthritis occurring in the intervals was relieved by menstruation. Now, if these had been so many cases of dysmenorrhoea, the occurrence might perhaps have been accepted as an argument for believing the dysmenor-

rhœa to be a part of a general rheumatic process. But though the conjunction is reported in seven, it is conspicuously absent in as many cases; and these are precisely the instances which do most to prove that the arthritis is a product of the uterine hyperæmia. With this simpler question we will deal for a moment, leaving the *modus operandi* to be discussed later on.

Among the seven cases referred to as not accompanied by dysmenorrhœa, is that of a lady now fifty-two years of age. She has had a large family, in all twelve, and it is as much as five years ago that she began to suffer from arthritis. Before the arthritis troubled her, she had begun to experience excessive menstrual loss. She consulted for this a distinguished gynaecologist, who found the uterus enormously engorged, but otherwise free from disease. The engorgement was lessened by treatment, but not by any means cured, and the menorrhagia went on. The arthritis first came in the form of sharp inflammation and swelling of the knuckles of both hands, rendering them completely useless. It began usually on the second or third day of the menstrual flow, and continued as long after its cessation. The periods becoming more frequent, and lasting longer as time went on, she became reduced to a very pitiable state. She was anæmic, exceedingly feeble, was crippled in hands, wrists, and knees, and lost her rest by reason of what she called "fidgets"—uneasy but indefinable sensations in her limbs and abdomen, unaccompanied by pain or spasm. Change of air and of scene, baths, tonics, alteratives, were all used in addition to local remedies, but no relief was obtained till, in the course of time, as she reached the age of fifty years, the periods began to be less frequent. At length, intervals of two or three months occurred, and allowed her to gain strength, when she lost her arthritis and her fidgets, and appeared perfectly healthy. Of late, the periods have been still further apart, but still, whenever the catamenia appear, she is once more crippled. The association of the arthritis with this painless menorrhagia began clearly at a time when she was weakened and drained of blood. The fidgets illustrate the irritability of the spinal cord related with imperfect nutrition, and the arthritis comes out as a resultant of two conditions, uterine irritation and spinal sensitiveness. I have another and very similar case under observation.

A lady aged 51, the mother of six children, came to me recently with a gouty-looking inflammation in the elbows, wrists, hands, and knees. This had occurred a day after the return of the catamenia, previously absent for twelve months. She had no signs of gout in the shape of deposits, and her own expression was, that she felt the attack to be really "in the nerves". The period was short, and the arthritis disappeared. But the catamenia having since returned with unusual freedom and duration on two occasions, she has each time had the arthritis severely enough to cripple her. The arthritis comes on at the end of the periods, the last of which was accompanied by abdominal pain, a circumstance hitherto unknown to her.

In a third case, an unmarried lady aged 37 has a large uterine fibroid of some years' existence. She is anæmic, and, being of an extremely sensitive disposition, is much depressed and anxious. She has typical nodosity of the finger-joints, paroxysmally painful at the periods. The catamenial flow is excessive, but there is no dysmenorrhœa.

I will only relate one more case of my own, before proceeding to quote from a few authors of importance. But this at more length.

E. S., aged 41, widow, was admitted into the Alice ward, St. Thomas's Hospital, under my care, in September 1877, having previously been under me as an out-patient. Her family history was not unfavourable. She was said to have had "brain-fever" and inflammation of the kidneys when a young woman. Ten years ago, she had an attack of "rheumatic fever", since which she has never been free from pain in the joints. The pain and stiffness had so increased of late, that she had been obliged to give up her occupation of housekeeper, and seek admission.

When she was admitted, all the joints of the limbs were swollen and painful. The metacarpo-phalangeal joints in particular were much enlarged, and the fingers bent on the palm; the ulnar side of the dorsum of the hand was much wasted. She said that all the joints cracked, and felt as though the bones were being rubbed together when she moved them. The knees, ankles, elbows, and shoulders were all swollen and misshapen, and she said that the hips were also painful on movement, although no swelling existed. The right arm was very stiff at the elbow. There were no uratic deposits to be found. There was no affection of the heart, and no change in the size of the liver; the urine was normal; there was no fever; the catamenia had been absent for three months. She was not anæmic. After admission, she had occasional exacerbations of pain in different joints at different times, together with some rise of temperature, to 102.8 one evening, when the right shoulder was the seat of attack.

On October 11th, she had severe right facial neuralgia and sharp

pain in the right wrist. Towards the end of the month, she began to suffer from diarrhœa, and when this prevailed, the joints were easier. She had now ovarian tenderness on both sides.

On December 4th, she had pain across the sacral region, and a continual desire to pass urine, micturition being followed by burning pain in the urethra. There was no vaginal discharge. Her manner was excited and hysterical.

On the 9th, she complained of severe pain in the vertex, followed by vertigo and double vision, with slight internal strabismus, more marked in the right eye.

The next day, she was delirious, and noisy to violence; declared that she could not see at all; and had still strabismus when at rest, though able to move the eyes freely if she pleased. The pupils were equal, were not dilated, and acted naturally; the optic discs appeared normal. There was no rise of temperature. The symptoms were soon fully declared as those of hysterical mania; and when this was developed, the arthritis completely disappeared, leaving, of course, much swelling of the articular ends of bones. Joints which had been stiff and exquisitely tender, were now abnormally relaxed, and could be moved briskly without eliciting a sign of pain. It is to be remarked that, otherwise, there was no analgesia. The loss of substance at the articular surface was well seen in the looseness.

On January 18th, the catamenia made their appearance. On the 22nd, she was almost sane again, and fed herself naturally for the first time for nearly six weeks. She speedily improved in health, and on February 10th, the catamenia again appeared. After this, she was perfectly rational. But on the 26th, both ankles were swollen, painful, and tender, and the arthritis was gradually re-established.

On April 3rd, the following note was made: "Still has slight stiffness in right arm, especially in the shoulder; the little finger stiff, middle joint enlarged and a little painful; there is swelling of the right ankle, especially on the outer side; no redness, but pain, especially at night, and tenderness on pressure. Appetite good. Bowels regular. Sleeps well. No delirium or aberration. Does work and makes herself very useful in the ward. Catamenia absent since February 18th. For last fourteen days has suffered from flushes of face, vertex-headache, etc. Otherwise feels quite well." She was then discharged.

From the first, I regarded this arthritis as of ovario-uterine provocation. When the ovarian tenderness appeared in November, I treated her with ergot, Indian hemp, and cold compresses over the lower abdomen. It was just as the arthritis began to relax that the mania broke out. When, later, the mania was fully developed, the arthritis as an active process ceased altogether. If we apply the term "reflexion" to the propagation of excitatory impulses from uterus to joints by the way of the spinal cord, we may perhaps apply the term "refraction" to the transmission of the impulses through the cord to the brain. The strabismus, and loss of vision without affection of the retinae, are points in favour of the supposition that the excitement affected the convolutions of the cerebrum. The resumption of arthritis on the cessation of the emotional and intellectual disturbance, and the coincidence of these changes with the return of the catamenia, appear to show that the mania, severe as it was, marked a lower degree of the local congestion than the arthritis. The excitement, when reaching a certain degree of severity, causes more response in the cord than transmission; makes the cord, so to speak, opaque, and therefore a reflector; just as, in many cases, convulsion or spasm takes the place of pain. The appeal is, as it were, too violent for delay, and the cord sends out at once trophic or muscular impulses, as the case may be, without reference to the higher centres.

I have assumed, you will observe, that this arthritis was of reflex causation. This is, in fact, the only conclusion to which I can come, though no doubt great authorities have taken a different view; and, before going further, we may with advantage refer to some of them.

So great a clinical observer as the late Dr. Todd was not likely to miss the relation of which I am treating, if it existed. And he did make the observation. In his Croonian Lectures, 1843, he wrote: "It is remarkable how frequently this affection" (the symmetrical nodosities of the hands, called by him "chronic rheumatism of the joints") "occurs in women, and how rarely in men; and there are many facts which indicate that, in the former, it may have an uterine origin, either connected with the puerperal state, or from a defective or difficult catamenial action." He was inclined to believe that "the unhealthy secretions of the uterus afford material for the production of rheumatic matter". In these lectures, he quotes Sir Henry Holland, Sir Charles Locock, and Dr. Rigby as authorities in favour of the opinion that there is some connection between the sexual functions and the causes and course of gout and rheumatism. The idea of a morbid matter ran through all these opinions and through his well known theory as to the causation of acute rheumatism by uterine disorder and pregnancy. In his

lectures, several cases are narrated to support his ideas, and illustrate excellently the clinical relation I have sought to establish, although a different inference is drawn as to the mode of causation.

Haygarth I have already quoted. Fuller speaks decidedly as to the fact that "rheumatic gout attacks women rather than men". "It fixes", he says, "upon the girl just arriving at puberty, whose menstrual functions are ill-performed", and it occurs frequently at the "cessation of menstruation", or during the debility which follows a miscarriage or a difficult or protracted labour, more particularly when accompanied by flooding".

After reading this, it is somewhat perplexing to find, on reference to Adams of Dublin, that, in his experience, Haygarth's statements are not confirmed; that he finds men to be as subject to "chronic rheumatic arthritis" as women. But then he says further that men suffer most in the hips, women most in the hands and wrists. And if, instead of crossing St. George's, we cross the British Channel, we find an equal discrepancy among French authors; for, while Trousseau regards this arthritis as more common in women, Follin and Duplay say that it is more common in men. Here again the attention of the observers has evidently been bestowed on different classes of affections. Trousseau speaks of the polyarthroses, Follin and Duplay of the monarthroses, typified in morbus coxæ senilis. It is evident that differences of individual practice, of climate, of social position, and of occupation, will bring very different groups of ailments under different observers; but it is also clear that the testimony of the excellent clinicians here referred to confirms the first proposition that there is a definite relation between uterine affections, particularly when they involve congestion, and chronic rheumatoid arthritis, particularly with that form of it which affects the finger-joints and wrists.

The assumption that any specific poison is at the root of this and other rheumatic or rheumatoid affections, rests upon very slender evidence. Even the great authority of Prout has not led to the acceptance of the lactic acid theory. The idea, no doubt, affords a very plausible explanation of many of the phenomena, but it is quite inapplicable to many. Thus, the arthropathy of spinal affection, and the arthritis of traumatic origin, would clearly be outside it; and the steps by which these are connected with other forms of arthritis are so much in favour of a source in common, that, without further argument, I shall put aside the *materies morbi* idea, and go on to the consideration of the nervous relations.

The existence of what one may call a middle term, in the shape of exalted susceptibility or reflex activity of the spinal cord, must enter into the comprehension of our subject. All writers have attached importance to enfeebling influences in the causation of rheumatoid arthritis. Anæmia, however arising, all drains on the system, all sorts of wear and tear, have had their share in the total effect estimated. One of the most notable effects of such causes is undue excitability of the central nervous system. In all organs, excitability increases as nutrition is impaired. The ratio of excitability to poverty reaches the highest development in the organs devoted to reception and response. We find, therefore, an over-sensitive spinal cord co-operating with an excited uterine system to induce, by reflex agency, lesions in the joints, just as we may find a similar alliance of irritated prostatic urethra and spinal weakness leading to arthritis or paralysis. The part played by the spinal cord may, however, be here a direct one, and not a reflex one. The opinion that a myelitis by extension is the true cause of the joint-affection is extensively held on the continent.

We have now seen rheumatoid arthritis as a lesion common to several kinds of ailment; we have seen it as a product of mischief in the spinal cord, as an effect of gonorrhœa and simple urethritis in the male, and of ovario-uterine irritations in the female. We find it next a result of direct injury to the joint affected (as in morbus coxæ senilis); and from a joint thus affected, it may spread to the rest, in a way only explicable by reflex nervous influence. The setting up of rheumatoid arthritis in one joint by an injury; its extension to a symmetrical joint soon afterwards, and its further symmetrical invasion of a large proportion of the joints, has been described in a case reported by me elsewhere. I may here adduce another case in which nervous intermediation offers the best, if not the only, explanation. A single lady aged 47 had, at the age of forty, cut the end of the index finger of her left hand. The cut was exceedingly painful, and healed imperfectly. Before it healed, the last joint of the same finger became inflamed and swollen. Soon afterwards, the rest of the knuckles of that hand were all involved. Three years later, the left foot was attacked, then the right foot, and at last the right hand. There were no gouty concretions anywhere; no lead-poisoning, and no catamenial disorder. Later on, the catamenia ceased without giving trouble. We may find also a rheumatoid arthritis, according to the observations of P. Berger, produced in the knee-joint by fracture of the femur near the hip. Further,

although it is generally held that chronic rheumatism is not attended with the local changes of rheumatoid arthritis, and a distinction is thereby held to be established between rheumatism generally and rheumatoid arthritis, there are not wanting cases in which a true rheumatoid arthritis has its beginning in an attack of acute rheumatism. I have lately had a case in which the lesions of rheumatoid arthritis were present in a typical form in a patient who had mitral disease as a result of acute rheumatism, the arthritis having begun as a continuation of the acute attack. The nature of the affections in the heart and joints was in this case verified by *post mortem* examination. And lastly, the lesions of rheumatoid arthritis are found in conjunction with foreign growths in joints, and with chronic gout. The natural inference is surely that "rheumatoid arthritis" is not justly separable as a disease of independent character; that the lesions are those of a chronic arthritis, which may be variously produced, in the same way as a neuralgia may be variously produced. I should propose, therefore, to drop the word rheumatoid altogether in the general classifications of arthritis, and to refer the condition to its proper cause, local or remote. Accordingly, in nosology, I should retain such terms as "blennorrhagic arthritis", "urethral arthritis", "rheumatic arthritis", and "arthropathée des ataxiques", and introduce new terms, such as "hystero-arthritis", "myelo-arthritis", "traumatic arthritis", and others that may be necessary; while, for the popular designation of the local malady, I should still use the expression "rheumatic gout". This distinction, I beg to urge, is a thoroughly practical one. As long as we give one name in our own minds to a variety of conditions, we tend to treat them alike. We can only be successful in our treatment of the conditions when we sift our cases, when we single out the particular agent in the production of each arthritis, and take measures to oppose, abolish, or control that agent.

REMARKS

ON THE

COMPULSORY NOTIFICATION AND REGISTRATION OF INFECTIOUS DISEASES.*

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MANY years have passed since the late Dr. Henry W. Rumsey of Cheltenham, one of the most distinguished of the founders of State Medicine, wrote the following words:—"There are literally no published records of the cases of sickness attended at the cost of the community. The sanitary state of the people is, therefore, inferred solely from the number of deaths—that is, from only one of the results of sickness—no public account being taken of the number and duration of the attacks which shorten the effective lifetime of the population." He continued:—"Facts are accumulating to prove that the mere number of deaths occurring in any locality bears no constant or even approximate ratio to the real amount of unhealthiness existing there. As a necessary result of improvement in domestic management and medical treatment, and owing to the removal or absence of those more virulent agents of destruction which prematurely sever the threads of life, its duration has been lengthened in our great cities, but at the same time the sickly and infirm period of existence has been prolonged, probably in a greater degree than even life itself. Chronic diseases, or, at least, functional disorders, have increased, vital force is lowered, man's work is arrested, his duties are unperformed, his objects fail, though he still lives. Weakly diseased children are now mercifully helped, as they never were in olden time, to grow up into weakly, ailing adults, whose children inherit their unsoundness. Is this true sanitary progress? Does it deserve the ostentatious parade of a decreasing death-rate?"

When these eloquent words were penned, only a few far-sighted thinkers like Rumsey, Acland, Farr, and Stokes, had turned their attention to the registration of disease; and in this connection I would particularly allude to a thoughtful paper by Dr. Arthur Ransome "On the Need of Combined Medical Observation", which was published in the BRITISH MEDICAL JOURNAL of October 8th, 1864. At the present day, however, it seems to be generally acknowledged that statistics of deaths, although founded on a more or less complete system of registration, are to a large extent wanting in precision and in scientific value. But, nevertheless, the advantages which have ever resulted from an approxi-

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