

cold ; or when the individual is debilitated by some disease, such as scarlet fever or some other trouble ; when owing to bad food or depressing influences which reduce the system below par. But not all persons exposed to these influences will fall victims to acute rheumatism. So we are forced to admit that the system must be in a peculiar condition ; these must be something beyond the mere exciting cause, and that has been called the rheumatic aches, which makes a person liable to attacks of rheumatism on exposure to any of these causes.

Among predisposing causes, heredity plays a very important part. Persons of rheumatic stock are more liable to this disease than those who come of parentage free from it. Persons who have had one attack are very liable to have another. I do not believe exactly that one attack of rheumatism predisposes to another, for that peculiar condition of the system which led to the first attack will also make the patient liable to a second or a third. There is really nothing in the attack of rheumatism itself, except that it lowers the vitality of the system, that can be looked upon as predisposing to another attack.

The disease began as follows : This man tells us he felt cold ; then he had fever. Sometimes a distinct chill is first experienced. In this first attack the disease was confined to the knee-joints. It is a notable fact the rheumatism affects by preference the larger joints. Another peculiarity of the affection is that it flits about. I know of no disease that furnishes a better illustration of what has been called metastasis. It affects one joint, which swells up and becomes tender and painful—becomes the seat of excruciating suffering and of a really violent inflammation, and as if by magic it disappears in a few hours or in a night, simply to transfer itself to another joint, frequently the corresponding joint upon the opposite side, or from the knee to the shoulder, and so on. These joints then in their turn become swollen, red, and tender. The pain is often greatly aggravated by the slightest provocation, even by some one walking across the floor.

You must not always expect that because the disease attacks a new joint there will be a speedy subsidence in the joint first affected. The disease may affect all the joints at the same time so as to render the individual helpless.

Along with this affection of the joints there is high fever, as there was in this case. This sometimes runs as high as  $105^{\circ}$  ; sometimes indeed we have hyperpyrexia, as it is called, in which the temperature has been known to run as high as  $112^{\circ}$ , but these are rare exceptions which you may never witness although you pass a long life in active practice. The fever is usually remittent. There is an exacerbation in the evening and toward morning a remission, but it does not run as regular a course as we observe in typhoid fever. It is not characterized by regular excursions, as in acute pneumonia, but it varies very much for several reasons. First of all, each invasion of a

new joint will be characterized by a rise of temperature. Any complication will be accompanied by it. Sometimes you will find that the first evidence of the disease is not an affection of this or that joint, but a rheumatic inflammation of the heart. I do not remember having witnessed such a case, but it is well known that the cardiac inflammation may be the only evidence of the rheumatic diathesis at the time. For instance, a man has had an attack of inflammatory rheumatism and passed through it without any cardiac complication. A few months after that he is attacked again, and this time it is not the joints but simply the pericardium or endocardium that is the seat of the inflammation ; and after this has existed for a few days, then lo, and behold, a joint affection sets in. This or that joint becomes tender, swollen, red, and painful, and we have now a typical case of acute articular rheumatism. The tongue is usually coated, the appetite wanting, the bowels constipated, and the urine scanty and loaded with urates. You must make the distinction between these and uric acid. Even so far as gross appearances are concerned this is easily done. Uric acid lies at the bottom of the vessel like fine, glistening sand. It does not stain the bottom, and when you tip it up you see the uric acid roll over. When you have a deposit of lithates the vessel is stained by it of a brick-dust or pinkish color, and while we find the uric acid as soon as it has had time to settle, the lithates do not appear until the urine cools. Sometimes the urine is muddy when it is first passed. This is not infrequently the case when the patient drinks but little, when the skin is over-active, and when there is high fever ; but even then we do not notice the staining of the vessel until after the urine has stood for some time.

The skin as a general thing is bathed in sour-smelling perspiration. I do not believe that the perspiration really is more acid in reaction than in health, but the acid is peculiar. It gives a very sour and unpleasant odor, and is in greater abundance, simply because of the increased perspiration, and we are likely to presume that the latter is more intensely acid. Another thing to be noticed is that the sweating gives no relief to the fever. In acute rheumatism the symptoms are in no way alleviated by the free perspiration, but, on the contrary, the more severe the rheumatic fever the more perspiration there is apt to be. The popular opinion is that when a patient sweats freely he can have no fever ; that free perspiration indicates a condition of the system the very opposite to that of fever. This is a great mistake. For instance, in some forms of puerperal fever, where the temperature runs very high indeed, the surface is bathed in copious sweats. In that condition of far-advanced phthisis when we have constant hectic fever the surface is bathed in drenching sweats—the thermometer in the axilla showing a high temperature indeed. So we find in rheumatism, also, that, though there is copious perspiration, this in no way abates the affection nor in any way lessens the intensity of the fever.