

the diseases of childhood is full—mumps, chicken-pox, whooping-cough, measles, scarlet fever and diphtheria appearing in their turns, and now the onset of tuberculosis shows that once again the weakened defenses have been broken down, and the penalty must be paid for disobeying Nature's laws.

Summing up the conclusions to which I have arrived on the subject of predisposition to tuberculosis in bones and joints, I would arrange the etiological factors in this order:—

Of greatest importance, a weakened vital resistance, acquired from any of the influences I have described. Secondly, inheritance of a low resisting power to infectious disease in general. And of least importance of all, that is commonly known as "heredity."

The second heading in the discussion of the etiology was local predisposition. Of our total of three hundred and eighteen cases, one hundred and thirteen, or over one-third, gave a definite history of injury. A typical history of these cases, as we receive them, is somewhat as follows:

Two months ago, Johnnie fell on the ice and severely injured his knee. For a few days he limped about with considerable difficulty, but gradually the pain and stiffness disappeared, until finally the only indication of an injury was a slight limitation of movement in the joint. Six weeks later it was noticed that he began to limp again, and so on the various symptoms proceeded to assert themselves.

The presence of that bridge of slight limitation of movement between the actual injury and the onset of the typical symptoms leaves no doubt in my mind that the injury was the direct cause of the disease. Frequently, of course, you find cases where the injury was of some trivial character, such as a slight bruise or twist, and in these the signs of trauma have completely disappeared before the onset of the symptoms of tuberculosis. But the uniformity with which we find these patients giving a history of injury at a certain definite interval, four to six weeks before the onset of the disease, proves conclusively that trauma is a potent factor in aiding the growth of the bacillus of tuberculosis.

The statement was made above that over one-third of our cases gave a definite history of injury. This, however, does not give a correct idea of the important part injury plays in the etiology of the disease. In the total number of cases treated here are many from whom it would be impossible to get such a history, even though there had been a definite traumatic influence. For instance, children under four years of age might easily have had a fall, of which the parents knew nothing, and as a result our statistics would suffer. To get over this difficulty I have picked out the histories of the