

PROGNOSIS IN THE HEART DISEASES OF CHILDREN.*

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I have examined several text-books on the diseases of children, and in all of them I found that the discussion of prognosis occupied but very little space. It would not take me ten minutes to read to you all that I found in two or three text-books, and it will not be necessary, therefore, for me to occupy very much time in discussing the subject. It has impressed me, as it must have impressed every physician who has had the opportunity to see sick children, that when they suffer from disease of the heart the prognosis should generally be more hopeful than when adults suffer with heart disease. This is partly because they are more elastic than adults, whose tissues are stiffer and may almost be said to be brittle, and most of all, perhaps, because children who have not attained their full growth have the opportunity for repair during growth. Injury, or any distortion of the heart that is caused by disease may be effaced as the organ increases in size, for the usual tendency of Nature is toward the production of an ordinary type. If due allowance is made for the fact that the likelihood of recovery is greater than in adults, and for the fact that children often outgrow disease of the heart which would be incurable in adults, the prognosis in the heart diseases of children need not be very different from the prognosis in similar disease in older persons. In illustration of the capacity of children to overcome serious organic disease of the heart, I will describe two cases that were under my care:

A woman, now 34 years old, had acute endocarditis during the course of an attack of measles with which she suffered when she was 8 years old. After recovery from the acute attack and for some years afterward, there was a blowing systolic murmur at the apex of the heart, with increase of force of the cardiac impulse. Gradually these evidences of disease of the heart have disappeared and the patient is now a healthy woman. Physical examination yields no evidence of increase in the size of the heart, nor of valvular disease. It seems beyond question that in this case there was organic disease which was outgrown.

Another woman, now 23 years old, had a violent attack of acute chorea with endo-pericarditis when she was a child of 8. There was a murmur which was so loud that it could be heard at the distance of a yard from the child's body. I have seldom seen such severe chorea as existed in this case. There was almost constant and very violent muscular twitching. The illness lasted for a long time, for the child was confined to the house from the early part of January until the month of May. After her recovery from the acute attack, there was a blowing systolic murmur at the apex of the heart with irritability of the cardiac action. These signs continued to be present for some time after the attack, but I do not remember exactly how long. The patient is now a healthy, active girl, and careful physical examination fails to reveal any definite evidence of disease. There is no cardiac murmur audible, but possibly the heart-beat is a little irritable or of slightly increased force. I have often wondered if there are pericardial adhesions. However, as the patient enjoys good health, and as there is

no positive evidence of disease of the heart, the case must be classed as one in which organic heart disease was outgrown.

The gravest prognosis should generally be given in cases in which there is conclusive evidence of the existence of great enlargement of the heart. In children, as in adults, it has been my experience that when once the heart becomes greatly enlarged, the patient very rarely recovers and generally goes from bad to worse until death occurs. The existence of valvular disease as shown by the presence of murmurs, even if these be very loud, I consider as of comparatively little importance. I have already expressed myself on more than one occasion as of the opinion that hypertrophy of the heart is not a compensatory condition, and that hypertrophied hearts are always hearts with degenerated walls. This subject is a most important one, but it is one that it would not be well for me to attempt to discuss in full just now. In my book on "The Origin of Disease," in the latter portion of the chapter on the heart, I have expressed my views on the subject.

The histories of two children who were under my care when I was one of the attending physicians to the Children's Hospital, illustrates how death generally comes if the heart is hypertrophied. These were two little girls who were in the wards a number of times in different years, suffering with heart disease and dropsy. In both the heart seemed to be greatly enlarged. They would stay in the hospital for a time and improve until they seemed to be almost well, but the evidence of the existence of cardiac enlargement always persisted. Both of them finally died after several years, the one at the age of 12 and the other at 14 years. Post-mortem examination revealed, in each case that the heart was greatly enlarged and the walls degenerated. In one of the cases the pericardial sac was entirely obliterated by adhesions, and the pericardium enormously thickened. I made careful microscopic examinations in these two cases, of other organs besides the heart, and although there had been little or no evidence during life of any disease except that of the heart, in both of them the microscope revealed the presence of disease of other organs—slight renal fibrosis and other conditions parallel with those found in adults when they die of similar disease. If in cases of heart affections the disease is confined to the heart alone and the other organs remain healthy, it is wonderful how much the heart can bear and yet the patient recover. But, on the other hand, if heart disease is but an expression that organic changes are widely spread in the other organs, then the prognosis must be bad. This is true of children as it is of adults. In the former, heart disease is less fatal than in adults, because they are, for the various reasons that have been given, able to recover from disease of such severity that it would necessarily kill older persons. If a child unfortunately acquires heart disease and survives it, he is more likely to live long than an adult would be under similar conditions, because the body of a child has more capacity to become accustomed to disease, and for this reason prognosis must be more favorable in children than in adults.

In conclusion, let me repeat that probably the most important difference between prognosis in heart disease in children and in adults is that the former have the better chance of recovery, owing to the opportunity they have to outgrow the disease.

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