

## Progress of Medical Science.

### TYPHOID FEVER.

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*Prognosis.*—Death may occur at any stage of typhoid fever. A typhoid patient is not out of danger until all tympanites, diarrhoea, and other abdominal symptoms, which indicate that intestinal changes are still progressing, have disappeared. Independent of complications, the duration, type, and intensity of the febrile excitement has more to do than all the other elements in determining the prognosis in any case of typhoid fever. The height of the temperature on the eighth day determines the range of temperature that may be expected on each succeeding day. If upon that day it is not higher than 104° F., or 105° F., and has been regular in its development (independent of complications), the prognosis is good; in uncomplicated cases it very rarely rises higher than the degree it has reached at that time. A prolonged high temperature (above 105° F.) after the first week renders the prognosis unfavorable.

In mild cases, during the second week a marked morning remission occurs, which begins early and continues until mid-day; the evening exacerbation is late, and by the end of the second week there is a marked and permanent fall in the temperature. In severe cases, the opposite conditions are observed. A sudden rise in temperature, or a rapid and extreme fall at any period of the fever, is a very bad omen; the latter often precedes the occurrence of a severe intestinal hemorrhage. Marked variations from the typical temperature of the disease indicates the existence of complications. Slight decline, accompanied by great fluctuation of temperature, during the third week, is an unfavorable symptom. The natural power of an individual to resist disease, especially the effects of prolonged high temperature, is a very important element in prognosis. The organ which is the surest indicator of such power (especially in typhoid fever), is the heart. If the pulse is full and regular, perhaps beating at the rate of 110 or 115 per minute, if the cardiac impulse is good, and a distinct first sound can be heard, even though at the end of the second week the temperature stands as high as 106° F., the prognosis is favorable. If, however, the pulse has risen to 120 or 130 per minute, if the apex beat is feeble or imperceptible, and the first sound of the heart is indistinct or altogether obscure, with a tendency to cyanosis and pulmonary oedema, the indications are that the patient's powers of resistance are failing, and

under such circumstances the prognosis must be unfavorable. It is not so much the rapidity, as the regularity, a sudden falling and a sudden rising of the pulse, that indicates the impending danger. The rapid rising of the pulse upon the slightest excitement is the most unfavorable indication, as it shows extensive heart-failure and a rapid giving way of vital power.

*Age.*—The influence of age is very great in determining the prognosis in any case of typhoid fever.

The prognosis is much better in children than in adults. Occurring in persons over forty years of age, the prognosis is decidedly unfavorable, even though the symptoms may not indicate a severe type of the disease.

In the case of those individuals who habitually use alcoholic stimulants, whose powers of resistance to high temperature is diminished, the rate of mortality is very great.

The puerperal state renders your prognosis especially unfavorable. The danger to the patient is equally great, whether the fever comes on prior to delivery or during puerperal convalescence.

In this fever there is greater danger to those who are suffering from any form of chronic disease, than to those who are in a healthy condition at the time of the attack.

The complications which influence prognosis are more numerous than those in any other disease.

I shall briefly allude to those which are intimately connected with, or dependent upon, the morbid changes ordinarily incident to the disease, and afterward speak of those which may be designated as accidental complications.

The parenchymatous changes which take place in the different organs of the body, during the progress of this fever, necessarily influence prognosis. For instance, the muscular degenerations of the cardiac walls and the consequent loss of heart-power, which favors pulmonary and other hypostatic congestions, and the diminished quantity of blood sent to the various tissues of the body, interfere more or less with their nutrition. Necrotic and gangrenous processes, sometimes met with in the cellular tissues of the surface, and along the line of the intestines, also the venous thrombi which so frequently develop in a protracted case of this fever, are, to a certain extent, the result of this cardiac weakness. It is apparent that the development of extensive cardiac degenerations must render the prognosis unfavorable.

Excessive cardiac weakness favors the development of blood-clots in the heart cavities; these may break up and cause embolism somewhere in the course of the general circulation, and thus lead to changes which may destroy life. Again, intestinal perforations, one of the results of the intestinal changes incident to the