

have been given such advice and his life so regulated that it would have been prolonged.

In some cases nature comes to our aid. Through over-work on the heart the mitral valve gives a little and there is some regurgitation, sufficient to lower the tension somewhat and so prevent the heart going on to failure or the occurrence of cerebral hemorrhage. Thus in cases of high tension a leaky heart may act as a safety-valve and not be such as to call for digitalis or other heart drugs.

*Treating Blood Pressure Medicinally.*—This is by no means an easy thing to do. It requires both skill and good judgment, because in some part of the system there may be sclerosed vessels and the general pressure will have to be raised in order that sufficient blood be supplied to the diseased tissue to nourish it and enable it to do its work. A cirrhotic liver or a chronic nephritis will require much hypertension in order that these organs come at all near their proper and necessary functioning. Take a man of sixty with œdema of the lower extremities, dyspnoea, or very little exertion and a systolic pressure of 160. He had been dieted, amount of fluids limited, has been allowed very little tea, coffee, tobacco or alcohol, and the bowels have been freely evacuated; yet there has been but little improvement. Very frequently in such a case if digitalis or strophanthus be given, the tension raised to say 180, there will be a marked improvement. Here with high tension, sclerosed vessels, a laboring and deficient circulation, digitalis, while it still further increases the tension, has really lessened the work of the heart because if we take the pulse pressure and multiply it by the pulse rate we will get a criterion for the amount of work the heart does; then take the increased pulse pressure after the drugs have shown their therapeutic effects and multiply this by the pulse rate and the product is less owing to the lower rate of pulse, therefore less work has been done, and in addition because of the lengthened diastole the heart itself has been rested, also better nourished, especially so if it is true that the circulation in coronary vessels is carried on mainly during diastole.

In addition to the digitalis and strophanthus, there should be extra elimination. Ten to thirty grains of blue mass two or three times a week, followed in six or eight hours by a saline, will give beneficial results.

When the patient is doing well he may be given ten grains of potassium nitrate, ten grains potassium bicarbonate, and from three to five grains sodium nitrate in hot water or an aperient water every morning. This will have a marked benefit in keeping down the tension. As an addition to this a dose of blue mass and saline every week or two.