

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 one hundred and eighty-one, 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 the 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 potassium nitrate, ten grains potassium bicarbonate and from three to five grains sodium nitrite 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.

In the use of depressor drugs, it is well to bear in mind that they vary as to their length of action, the establishment of tolerance, and that it is not fully proven how beneficial they really are. Glonoin in grs. 1-100 acts for about an hour, and a tolerance is soon established, so that the dose has to be increased. Sodium nitrite in two grain doses lasts about six hours and there is no establishment of tolerance. Manitol nitrate, a drug I have not used, is given in grain doses and its effects last about six hours with no establishment of tolerance.

When the heart begins to fail, practically no matter how high the tension we must have recourse to the digitalis group of drugs, and our sphygmometer will aid us in noting improvement.

*Some Conclusions:—*

1. Blood pressure may vary physiologically in the same individual with wide limits.