

Editorials.

The Digitalis Group in Treatment of Heart Diseases.

WHEN Dr. George W. Balfour, of Edinburgh, speaks upon any subject of cardiac pathology or therapy, we are naturally disposed to listen. In the *British Medical Journal*, for 14th December, he has a lengthy article under the above caption. The digitalis group contains a number of plants, from the deadly up to the comparatively innocuous convallaria and adonis. These have an action on the heart more or less resembling the plant which gives its name to the group.

The fundamental action of this group is to increase the elasticity of muscular fibre. This causes the heart to dilate more slowly and to contract more firmly. The heart will thus be more fully emptied. The circulation through the heart muscle is a very short circuit, and consequently, the heart receives more blood than any other organ in the body in the same time. The arterioles are likewise richly supplied with blood, and are acted upon by this group of plants with considerable energy, but not so much as the heart, owing to the rapidity of the circulation through the heart. The effect of this is that every muscle in the body is flushed with blood, at an increased pressure and their nutrition greatly improved, including the myocardium.

The above is mainly the action of digitalis. The entire group act in a somewhat similar manner, with many differences special to each member of the group. Digitalis acts powerfully on the heart and arterioles; ergot on the uterus and bladder, and less on the heart and arterioles, while strophanthus acts with much energy on the heart, but slightly on the arterioles. This difference in strophanthus is of much importance. Any increased arterial pressure that comes from its use must be due to greater heart-action, and will not be as continuous as that in the case of digitalis, because of the absence of the resistance from the arterioles. The muscular system will not be so favorably affected. Thus, in the employment of strophanthus, the results must come from its action on the heart, and this explains why the dose has to vary so much, say from five minims every four hours to ten minims every two hours.

Strophanthus has two advantages that must not be lost sight of. It is readily soluble in water, and acts with great rapidity on the heart. Thus, where prompt action is imperative, and absorption by the stomach slow and uncertain, the hypodermic administration of strophanthin is