

of abdominal wall containing the buried structures were removed, fixed and hardened in formalin (10 per cent.) solution in alcohol, and imbedded in paraffin.

The stains employed were haematoxylin and eosin, Van Gieson's fluid, resorcin-fuchsin, Weigert's elastic stain, orcein, Unna-Taenzer's elastic stain, Wasserblau-safranin and three per cent. silver nitrate solution, and Schmorl's modification of v. Kossa's calcium reaction. Special tests for the presence of phosphates and chlorides were made.

GROUP A.—AORTA BURIED IN UNDISTENDED CONDITION.

EXPERIMENT 1.—*Aorta after three days.* The vessel lies loosely imbedded in a quantity of granulation tissue, in the intermuscular space of the abdominal wall. The elements of the muscle and connective tissue of the buried aorta exhibit somewhat impaired reactions to the stains employed. The elastic structure of the vessel-wall stains well with the elective elastic tissue method and exhibits no indication of a degenerative change. The lumen of the art remains patent.

EXPERIMENT 2.—*Aorta after six days.* The buried vessel is firmly imbedded in recent granulation tissue. The lumen is occluded by a coagulum, in which commencing organization may be seen. There is a decided loss in quantity as well as in staining power of the muscle and connective tissues of the vessel but the elastic fibres are as yet apparently unchanged.

EXPERIMENT 3.—*Aorta after twelve days.* At this period the muscle and connective tissues have apparently been entirely absorbed, and the only remains of the buried vessel are the elastic framework. This structure is normal in appearance and to the elective stains shows a good reaction. The elastic fibrils, at the periphery of the vessel, exhibit a slight tendency to fragment, but this condition is strictly limited to fibrillar portions of the elastic structure.

EXPERIMENT 4.—*Aorta after twenty-seven days.* As in the previous specimen, the elastic tissue alone remains. A well-organized clot occupies the site of the occluded lumen. Though the elastic fibres generally take the specific stains well, yet there are small portions which indicate, by an impaired tingibility, an alteration of some kind. These areas occur chiefly among the peripheral and intimal fibres, the medial ones having so far escaped. In places also is seen a fairly well-marked fibrillation. No reaction is obtained upon using a special stain for degenerated elastin—the so-called elacin of Unna.

EXPERIMENT 5.—*Aorta after thirty-three days.* The aorta bears a close resemblance to the vessel buried twenty-seven days. In this specimen, however, the elacin reaction is obtainable, though it is not very marked. It appears to be confined to the internal elastic lamina. The newly forming connective tissue shows a tendency rather to compress than to invade the elastic structure. Fragmentation also occurs.

EXPERIMENT 6.—*Aorta after forty-two days.* An alteration of the staining