

consists, after ligation of the vessels, in the clearing of the bronchus for a space of 2 cm., the application of an intestinal clamp proximally, crushing of the tube, its ligation with chromacized gut or silk, and amputation of the lung; finally, the depression of the stump and its inclusion within the lumen of the bronchus by a continuous suture, (Fig. I).

Tiegel has pointed out the danger of a high closure of the bronchus owing to reflex stimulation of branches of the pneumogastric in the neighbourhood of the lung root. We have carried out successfully two experiments in which, after dissection and retraction of the left vagus, amputation of the whole lung was effected through the primary bronchial division. This procedure, of course, entails a certain amount of traction upon the mediastinum and opposite bronchus; so much, indeed, that after closure the stump retracts out of sight beneath the pericardium. No reflex disturbances were encountered in these two experiments, and although the animals eventually succumbed some days after operation (ten and four days respectively) from infection of the pleura, the bronchial closures effectually withstood pressures of 20 to 30 mm. of mercury without evidence of leakage.

In our further work we hope to investigate the question of loss of heat. Temperature observations after operation have invariably been subnormal. To what extent this loss of heat may be attributed to the large exchange of air in the pleural cavity during operation, is still a matter for investigation. Quite possibly the fault will be found to lie with the method of administering the anæsthetic.

We hope, upon a future occasion, to have an opportunity of presenting experimental results dealing not only with the question of the obliteration of cavities after the removal of lung tissue, but also the interesting questions of lung exploration, lung suture, the establishment of an anastomosis between the œsophagus and abdominal viscera, and the extirpation of the thymus gland.

Before closing we should like to express our thanks to Dr. Archibald for his frequent assistance at experiments; to Dr. Wolbach for his interest in connexion with the post mortem work and the preparation of specimens; to Dr. Wilkins for the excellent X-ray plates from which the prints here reproduced have been made; and to Dr. Tees for photographs of apparatus.