

tion of three lobes. The consolidation is quite similar in character to that occurring in lobar pneumonia of human beings. The lesion is a diffuse and evenly distributed (not patchy); exudative inflammation is attended by hemorrhage and the formation of fibrin. The pneumococci multiply in the affected part and they have been found to persist in those animals which were allowed to live longest (six days). In the nine animals which were killed the lesion was confined to the right lung. In the two which died there was involvement of both lungs. One died two days after the injection of a large amount of culture. Three lobes were completely consolidated and there was a generalized fibrino-purulent pleurisy and pericarditis and septicemia. The other animal, which had fever before the injection was made, died at the end of six hours. There was a generally distributed congestion and edema of both lungs, consolidation of one-half of the posterior right lobe and septicemia. None of the animals which were killed had septicemia.

Considering the regularity with which pneumonia has been thus produced it would seem that the method should afford valuable opportunity for studying pneumonia experimentally.

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The effects of resection of one vagus upon serum anaphylaxis in guinea-pigs.

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In a previous communication by Lewis and myself¹ it was demonstrated among other things that the death of guinea-pigs in immediate anaphylaxis was due to the production of a stenosis in the pulmonary air passages so that air neither left nor entered the lung and we brought forward evidence which pointed to a tetanic contraction of the muscles of the bronchioles due to peripheral action as the immediate cause of this stenosis. This view has since been shared by Anderson and Schultz² and by Biedl and Kraus.³

¹ Auer and Lewis: *Jour. of the Amer. Med. Assoc.*, 1909, liii, 458. Auer and Lewis: *Jour. of Exper. Med.*, 1910, xii, 151.

² Anderson and Schultz: *Proc. of the Soc. for Exper. Biol. and Med.*, 1910, vii, 34.

³ Biedl and Kraus: *Wiener klin. Woch.*, 1910, xxiii, 385.

On the basis of this conception, several series of experiments were carried out to determine, if possible, whether sensitization by the serum affected the vagus endings in the bronchial muscles, the muscles directly, or both structures. The experiments were carried out by sectioning one vagus in the neck, for according to Dixon and Brodie, the vagus of one side supplies the lung of that side only ; moreover there is no evidence of a cell station between the pulmonary vagus fibers in the neck and bronchial muscle.

This report deals with only a part of the investigation. In one series of guinea-pigs, one vagus was resected in the neck thirteen days after the sensitizing dose of horse serum had been injected. The toxic dose was given intravenously from 30 to 57 days after vagus section. All of the nine pigs died with typical symptoms within five minutes after injection of the toxic dose. The lungs showed the characteristic picture of inspiratory immobilization on excision, and there was no characteristic difference between the innervated and non-innervated side.

In another series, one vagus was resected fifty-five days after the sensitizing dose, and the toxic dose was injected intravenously from 6 to 14 days after vagus section. These animals differed in no way from those of the other series.

In a final series one vagus was resected in normal animals. These experiments are not yet completed and will be reported later.

From the data given above it seems clear that the bronchial muscles themselves are sensitized by the horse serum in anaphylaxis.

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Notes on the vaso-reaction in dogs produced by injections of extracts of the tubercle bacillus.

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This paper is a report of results in continuation of those read at the February meeting. Of especial interest are the results obtained with the blood serum of three tubercular calves which showed very slight lesions at autopsy. We obtained results