showed little difference in their pulmonary blood flow.

6. In experimental pulmonary blood volume decreased temporary, but after three weeks, it increased again. It was thought that it correlated to the remarkable increase of bronchial arterial blood flow, added increased pulmonary blood volume in non-diseased lung.

A Study of Radiocardiogram During General Anesthesia

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A very few litratures have been reported on variations of mean pulmonary circulating time during anesthesia with relatively new anesthetics such as Fluothane or Penthrane. Therefore, comperative study was carried out by the author on the radiocardiograms which were traced during fluothane, penthrane, ether or thiamylal anesthesia and their emergence after a rapid infusion of RISA (50 μCi at each time) using experimental animals. From those radiocardiograms, the author analysed mean pulmonary circulating time, pulmonary blood volume and cardiac output with the Stewart-Hamilton's method. Circulating blood volume was measured by a Well typed counter.

The following results were obtained from the above experiments.

1) Under spontaneous respiration, mean pulmonary circulating time in Fluothane or Penthrane anesthesia was prolonged twice to 3 times the normal value.

2) Circulating blood volume decreased during surgical stage and increased on emergence in either anesthetics. The author presumes that probably this phenomenon may be caused by primary congestion (pooling) of circulatory blood volume in some organs during anesthesia.

3) Cardiac output reduced during deep anesthesia and increased on emergence without distinction of anesthetics.

4) Pulmonary blood volume increased rate was penthrane, fluothane and thiamylal. On the contrary, pulmonary blood volume was not so reduced on emergence from fluothane or penthrane anesthesia though it was markedly decreased on emergence from ether or thiamylal anesthesia.

Several Considerations on Continuous Recording of Pulmonary Blood Volume Using with External Counting Method of RISA

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We have already reported the continuous recording technique of pulmonary blood volume.

In order to explain the physiopathological behavior of pulmonary circulation in normal subjects and chronic pulmonary diseases (bronchial asthma, chronic bronchitis and so on), we tried the continuous recording of PBV with above method.

When 4% CO_2 gas was given, PBV in each group decreased gradually and then maintained almost steady levels until CO_2 was removed.

Analising these behaviors in each groups which was brought with 4% CO_2 inhalation, we found some prominent drifts of PBV re-