

6. Since the *bulbus venis jugularis* is kept permanently open by the cervical fascia, the venous hum is continuous. The auricle, on the other hand, is only open during its diastole, and its murmurs are therefore intermittent.

7. The reëxpanding of the relaxed auricle is brought about by the influx of venous blood, the negative thoracic pressure, the displacement of the atrio-ventricular septum by the ventricular systole, and the simultaneous contraction of the great veins over-distended during the auricular systole. Only the last three factors have any influence in producing an active dilatation, by which the auricle exerts a sucking action on the venous blood.

8. The diastole of the auricle begins with the commencement of the ventricular systole. It is only at this moment that the three factors alluded to act together on the auricle, and at this time, therefore, the auricular aspiration and the production of the eddies and murmurs must be the strongest. Usually, indeed, the murmurs are only heard at the beginning of the systole. Later, during the ventricular systole, only the negative thoracic pressure is acting on the auricle.

9. The conditions for the development of a murmur are much more favorable in the left ventricle than in the right, because on the left side the pressure of the veins is greater, the retraction of the atrio-ventricular septum is more marked, and, especially, the veins are of much narrower lumen than on the right side. Anæmic murmurs must accordingly predominate in the left auricle.

10. Eddy-murmurs in the left ventricle (including such as are regularly formed in mitral insufficiency) are best heard over the position of the auricle in the second left intercostal space; or over the ventricle down to the seat of the apex. The predominant occurrence of anæmic murmurs in the pulmonary and mitral areas agrees with this statement.

11. The development of anæmic murmurs in anemia, cachexia, fever, etc., and the modification of the murmurs under different conditions may all be satisfactorily explained by the two factors;—altered degree of fulness of the pulmonary veins and change in the aspiratory power of the left auricle.

12. Anæmic murmurs in the right auricle develop with much greater difficulty, and are to be heard under the upper and middle third of the sternum. Clinically they occur very seldom.

The rare *diastolic* anæmic murmur is to be heard over the course of the superior cava, and must be considered a diastolic accentuated portion of a jugular venous hum.

DIPHTHERITIC GASTRITIS OR GASTRIC DIPHTHERIA.

TALFOUND JONES (*Brit. Med. Journ.*, 1889, ii. 880) reports a case of this very rare affection. The patient, a child of two years and ten months, developed difficulty in swallowing on the third day of the disease; on the sixth, she vomited several times; on the seventh, there was difficulty in breathing and frequent vomiting, the ejecta consisting of a little blood and some dark red pieces of a membranous character. Death occurred on the following day. The autopsy revealed a widespread membranous exudation of the pharynx and adjacent parts, the posterior nares, and the larynx down to the cricoid cartilage, where it abruptly ceased. The œsophagus was quite normal in every respect. The stomach had a soft, doughy consistence, and, when

opened presented an irregular, dark, reddish-brown appearance with a slightly olive-green tint. This was found to be the surface of a continuous membrane lining the whole of the stomach. It varied in thickness, averaging one-twelfth of an inch, but being thickest over the rugæ. It was adherent to the mucous membrane, but was easily separated and peeled off, and then exhibited on its under surface the imprint of the markings of the mucous membrane. Except in thickness and in its dark red color it differed little from the exudation in the pharynx.

The rugæ of the mucous membrane were of a black-red hue and studded with a dark red punctiform injection. The mucous lining between the rugæ was of a much lighter color. The intestines were healthy.

Under the microscope the exudation from the stomach presented an irregular fibrillated appearance with numerous red blood-cells and leucocytes.

STUDIES ON THE FUNCTIONS OF THE STOMACH IN PHTHISIS.

F. SCHETTY (*Deutsch. Archiv*, Bd. xlv. 219) says that as all the investigations carried on hitherto have as yet failed to give us any specific against tuberculosis, we are obliged to combat the disease in some other way, i. e., by strengthening the organism and making it as resistant as possible to the action of the poison. The dietetic and the climatic treatment are therefore to be considered, and of these the most important is the former, since the latter cannot so often be carried out. As the affection is essentially a wasting disease the dietetic treatment is greatly to be desired, but unfortunately often meets with the greatest obstacles in the form of gastric disturbances. The author quotes extensively from well-known writers regarding the digestive disturbances of phthisis, but says that no satisfactory explanation of the cause of this is offered. The fact that *gavage*, as practised by the French clinicians, is often of great advantage to the patient is an indication that in spite of the patient's dislike for food, there is no abnormality of the digestive capacity of the stomach. He cites the meagre investigations which have been conducted regarding the gastric function in phthisis, and then details the studies which he has made on twenty-five cases of the disease. He chooses both incipient and more advanced cases; those with but little fever, and those with marked pyrexia. He first examined the patient according to the method of Kuhn and von Mering, viz., in the morning, on an empty stomach, the patient received two hard-boiled eggs and one hundred to one hundred and fifty grammes of water. After an hour the gastric contents were carefully removed by aspiration with a soft tube, filtered, and examined. The examination consisted in determining: 1. The reaction. 2. The presence of lactic acid by the use of the carbolated-iron test. 3. The presence of free hydrochloric acid by the same reagent, as well as by Congo-paper, *vert brillant*, tropæolin, methyl-violet, and phloroglucin-vanillin (the last of which tests he considers the best). 4. The presence of acetic and butyric acids; tested by the odor. If it was determined that only inconsiderable quantities of lactic, acetic, and butyric acids were present, the amount of free hydrochloric acid was determined quantitatively by titration with one-tenth normal sodium solution. The peptic strength of fifteen cubic centimetres of the filtrate was