that in a high degree we rely on the intelligence and trustworthiness of the patient himself. In the special resorts, to be sure, we have at our disposal a certain number of provisions for control, but for how few of our patients can we procure the benefit of making use of such resorts? Even though the opportunity of exercising in the fresh air and under favorable climatic conditions gives the "Oertel cure" a considerable advantage, this is yet many times compensated by the fact that the Zander method, considered from its greater attainability, offers an important guarantee for proper and careful employment. But just as in determining indications, we ought never to fall into partialities, so in therapy, be it far from me to advocate one method when, according to the condition of the case, another commends itself more.

FINAL REPORT ON A CASE OF STOKES-ADAMS DISEASE.

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In the *Boston Medical and Surgical Journal* for Dec. 19, 1907, I reported a case of Stokes-Adams disease, with arteriosclerosis and a limited degree of hepatic cirrhosis. The patient died Dec. 15, 1907, and an autopsy was performed by Dr. Oscar Richardson. His report is below, preceded, however, by a very interesting description of the fundi oculi furnished by Dr. F. E. Cheney some days before the patient's death.

OPHTHALMOSCOPIC EXAMINATION.

There was no pulsation of the retinal artery, but the venous pulsation was much more marked than is seen under normal conditions. In the right eye there was almost a complete obliteration of the blood-stream at the point of exit of the central vein from the eye, following the pulsation, and this obliteration extended at times from the center (point of exit) to the edge of the disk. In the left eye the marked decrease in the size of the blood-stream was not noticed. This may have been due to a difference in the anatomical arrangement of the vein in relation to the physiological cup of the disk. Another condition of interest was noted, however, in the vein extending upward along the extreme edge of the cup border, and that was a slight venous contraction between the well-marked pulsations. This secondary contraction was not constant but seen at irregular intervals.

AUTOPSY BY DR. OSCAR RICHARDSON.

A man, sixty-eight years of age, 164 cm. long, well developed and poorly nourished.

Head. — On section the pia is slightly thickened and generally is infiltrated with a considerable amount of pale fluid. The vessels of Willis are not remarkable. The sinuses and middle ears are not remarkable. The brain weighs 1,295 gm. On section it presents no lesions.

Trunk. — The skin of the anterior abdominal wall in the region between the umbilicus and pubes shows several old scars, stated to be tap wounds.

On section, subcutaneous fat very small in amount, muscles thin and pale.

The peritoneal cavity contains a considerable amount of thin, pale, amber-colored fluid.

The appendix is not remarkable.

The anterior margin of the right lobe of the liver is four fingers' breadths above the costal border in the right mammillary line.

The pleural cavities contain a slight amount of pale fluid.

The bronchial lymphatic glands are slightly enlarged in instances, pigmented, and a few of them show small fibro-calcareous masses.

The right lung shows a few adhesions posteriorly and laterally. On section the tissue presents no areas of consolidation, is somewhat leathery and yields a considerable amount of yellowish red, frothy fluid.

The left lung is free. On section the tissue presents no areas of consolidation and is similar in character to that of the right lung.

Heart. — Weighs 390 gm. On section the myocardium generally is a little lax and rather pale.

The left ventricle wall measures 13 mm., the right, 2.5 mm.

The ventricular walls as a whole are rather thin and the columnæ carneæ flat. The auricular walls are slightly if at all thickened. The cavities of the left side are definitely enlarged, while those of the right side are but slightly enlarged. The auricular appendages are free. The mitral valve measures 9 cm. in circumference; the aortic, 7.5 cm.; the pulmonary, 7.5 cm. and the tricuspid, 12 cm. The pulmonary and tricuspid valves are not remarkable. The curtain of the mitral valve is smooth on its auricular and ventricular surfaces. The ventricular surface of the anterior cusp of the mitral valve shows a very few small, yellowish streaks and areas. These are situated near and just below the left posterior cusp of the aortic valve. In the region of the fibrous ring of the mitral valve, where the valve curtain is inserted, there is a slightly curving column of fibro-calcareous material, resting immediately beneath the insertion of the valve curtain of the posterior cusp and extending from there directly across and beneath the endocardium of the left ventricle wall and reaching finally to a point close to the base of the anterior cusp of the aortic valve and in the region of the bundle of His. This fibro-calcareous mass measures about 6.5 cm. in length, and where it rests in the fibrous ring of the mitral valve, in the region of the insertion of the curtain of the posterior cusp, it measures 7 mm. in width by 7 mm. in thickness. Beyond this it gradually tapers to its end in the region of the bundle of His. The fibro-calcareous mass rounds up under the endocardium and on section extends for a short distance into the myocardium all along its course. The chordæ tendineæ, where they are inserted into the papillary muscles, show a very slight amount of fibrous thickening, but otherwise than above mentioned the valve is not remarkable.

Aortic valve. — The cusps all show fibrous thickening and at their bases some fibro-calcareous change. Each cusp shows in the region of the orange body small, firmly adherent, grayish yellow, irregularly shaped, rather firm, slightly leathery, vegetationlike masses measuring about 1 cm. by 6 mm. by 4 mm. The endocardium below the cusps shows several small, yellowish, fibrous-like areas. The sinuses of Valsalva are enlarged and pouchlike and the intima of the aorta at the upper margins of the sinuses shows areas of fibro-calcareous change. The wall of the anterior sinus of Valsalva shows one or two small masses of fibro-calcareous material and about the orifice of the right coronary artery some fibro-calcareous plaques. The great sinus of the aorta is well marked but the intima of the aorta here is fairly smooth, showing only a few small

areas of fibrous thickening. The first portion of the left coronary artery shows a well-marked fibro-calcareous plaque, but beyond this the intima of the vessel is smooth. The first portion of the right coronary artery shows a slight amount of fibro-calcareous change in one or two places, but beyond this the intima of the vessel is quite smooth.

The arteries are free.

Aorta. — On section the intima shows here and there small areas of fibrous thickening, but in the lower part of the abdominal portion there is a slight amount of fibro-calcareous change. The great branches of the aorta show in their walls a rather considerable amount of fibrous change and in places well-marked fibro-calcareous plaques.

Liver. — Weighs 1,142 gm. The organ is small. The capsule, which is very slightly thickened, is smooth and glassy and rounds up over slightly irregularly surfaced liver tissue which gives over large areas a granular appearance. On section, the tissue is tough and faintly mottled with minute to small indefinite grayish areas.

Gall bladder, no stones. Bile ducts, free. **Pancreas,** not remarkable. The duct of Wirsung, free.

Spleen. — Weighs 472 gm. The capsule is grayish and slightly thickened. At one point on the surface of the spleen there is a small dull, grayish yellow area which on section is seen to be the outer surface of a roughly wedge-shaped, dense, dull yellowish mass, the peripheral portions of which are sharply marked off from the surrounding splenic tissue. The mass extends into the splenic tissue for a distance of about 2 cm. On section the splenic tissue is rather dark red in color, somewhat elastic and the follicles and trabeculae are visible. Adrenals, not remarkable.

Kidneys. — Combined weight 274 gm. The capsules strip, showing very slight adhesions in places. The surfaces are dull grayish red in color, granular in places and show here and there small depressions. On section the tissue is rather tough and the markings are fairly made out. The cortical markings are indistinct and the section surfaces are rather opaque and show some mottling with small indefinite grayish areas. The cut ends of the vessels in the section surfaces are quite distinct.

Ureters, free.

Bladder, prostate, seminal vesicles and testes on section are not remarkable.

The esophagus, stomach and intestines on section present no lesions.

Bacterial report. — Culture on blood serum: —

Heart. — No growth.

Microscopical examination. — Serial sections of the myocardium at the base of the anterior cusp of the aortic valve, including the region of the bundle of His and the end of the fibro-calcareous column which extends into this part, show after Zenker's fluid and Mallory's connective tissue stain, extensive fibrous and fibro-calcareous change all through the regions mentioned.

Anatomical diagnosis. — Arteriosclerosis. Dilatation of the sinuses of Valsalva. Sclerotic vegetations of the aortic valve. Fibro-calcareous endocarditis of the aortic valve. Fibro-calcareous mass in the region of the fibrous ring of the mitral valve with extension of the mass along the wall of the left ventricle to the region of the bundle of His. (Stokes-Adams disease.) Hypertrophy and dilatation of the heart. Chronic passive congestion. Slight chronic interstitial hepatitis. Slight chronic nephritis. Hyperplasia of the spleen. Infarct of the spleen. Ascites. Slight chronic pleuritis (right). Obsolete tuberculosis of bronchial lymphatic glands. Edema piae.

Clinical Department.

REPORT OF A CASE OF MEASLES IN UTERO.

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I wish to acknowledge my obligation to Dr. John H. McCollom, the resident physician at the South Department of the Boston City Hospital, for the opportunity of taking charge of the case here reported while I was his assistant resident physician.

The patient was a primigravida, nineteen years old, who entered the South Department on May 19, 1904. Physical examination at entrance was as follows: Well developed and well nourished. Chest negative. No aural or nasal discharge. Eyes: Marked suffusion and congestion. Mouth: Koplik's spots on buccal mucous membrane. Brilliant macular rash over roof of mouth and soft palate. Fading maculo-papular eruption of measles over the entire body, with a confluent rash over the face. Fine desquamation on the nose and ears. Abdomen enlarged to about the size of a full-term pregnancy. Position of fetus: O. D. P. Fetal heart 144 in right lower quadrant. Temperature 98°. Pulse 90. Respirations 25.

She made a good convalescence from her attack of measles and a week after entrance the eruption had faded, leaving considerable pigmentation over the body and a fine desquamation upon the face.

Eight days after entrance the patient was delivered by high forceps for delayed labor. The infant was examined immediately after birth by Dr. McCollom, who found that there was a mottling of the skin over the entire body and a branny desquamation over the chest and in the axillae. On the following day desquamation appeared over the forehead, on the plantar surface of the toes and between the toes. On the second day there was more profuse desquamation over the chest and face, being of a markedly furfuraceous character on the sides of the nose. Desquamation was also present upon the abdomen. On the thirteenth day very slight, fine desquamation could be seen over the temples and in the axillae. On the seventeenth day fine desquamation could still be detected in each lower axilla. On the twenty-first day desquamation had completely disappeared and there was no sign of infection with measles. Mother and baby were discharged well from the hospital on the twenty-third day after delivery.

The question arises, Did the fetus have measles in utero? The mother had a typical attack of measles, and the regular desquamation took place in the usual course of the disease. Delivery occurred during the period of desquamation of the mother, and the infant showed pigmentation and also unmistakable desquamation at birth. But did the infant have the desquamation of measles, or the normal exfoliation of the newborn? Holt¹ points out that normal desquamation begins upon the fourth or fifth day and is completed in from ten to fourteen days. In this case not only was desquamation present at time of birth, but traces of it persisted for twenty days. It is not necessary to consider the exfoliative dermatitis of the newborn mentioned by