

cyanosed; rheumatism ten years previously; thrill over pulmonary cartilage; faint murmurs; loud grating systolic murmur over whole corda, + at pulmonary cartilage; died with symptoms of malignant endocarditis. *Ductus arteriosus*—canal, two-third inches long, admitting quill; wall of aortic opening calcified; cone-shaped. *Vegetations: seat*—tricuspid valve, pulmonary artery; *character*—large ovoid mass  $1\frac{1}{2} \times 1$  inch in diameter, on upper aspect of pulmonary artery, just before orifice of ductus arteriosus, beginning beyond pulmonary valves; vegetation also on tricuspid valve; *infection*—not determined. *Embolism*—infarcts in spleen and kidneys. *Remarks*—dilatation of pulmonary artery.

No. 4. (Rickards: Brit. Med. Jour., March 23, 1889.) Male, aged seventeen years. *Clinical findings*—Always thin and pale. Precordial pain dyspnea, and night-sweats ten weeks; systolic murmur at apex, + at pulmonary cartilage; loud vibrating double murmur at second left interspace, not transmitted over sternum nor into neck; strong thrill over second left interspace. *Ductus arteriosus*—patent. *Vegetations: seat*—pulmonary valves, aorta, pulmonary artery; *character*—soft polypoid vegetations on pulmonary valves; large mass on anterior wall of pulmonary artery; round orifice of ductus arteriosus, partly occluding lumen. Small portions carried through ductus arteriosus into aorta, impinging on opposite wall of transverse arch; *infection*—micrococci in vegetations. *Embolism*—mycotic aneurysm of branch of right pulmonary artery; infarcts of lung, spleen, and kidney. *Remarks*—left ventricle slightly hypertrophied.

No. 5. (Kidd: Trans. Path. Soc., London, 1893, xlv, 47.) Female, aged twenty-two years. *Clinical findings*—dyspnea and wasting twelve months; double murmurs at aortic and pulmonary areas, and systolic murmur at mitral area. *Ductus arteriosus*—small oval opening size of goose-quill in left branch of pulmonary artery. *Vegetations: seat*—aortic valve, pulmonary artery, aorta, ductus arteriosus; *character*—Soft fibrinous vegetations on thickened, slightly incompetent aortic valve; warty vegetations on wall of pulmonary artery, just beyond thoracic valves; *infection*—not determined. *Embolism*—aneurysm of branch of left pulmonary artery; infarcts of spleen and kidney. *Remarks*—great hypertrophy and dilatation of heart, especially of left ventricle; pulmonary tuberculosis.

No. 6. (Hochhaus: Deut. Arch. f. klin. Med., 1893, Bd. 51, p. 1.) Male, aged twenty-four years. *Clinical findings*—rheumatism and endocarditis at twelve. Precordial pain, dyspnea, and symptoms of general infection two months; systolic murmur at apex; long drawn-out humming, buzzing diastolic murmur, + over pulmonary cartilage localized anteriorly, distinct in back in left interscapular regio: pulmonary second loud. *Ductus arteriosus*—short canal 6 mm. wide, aortic opening funnel-shaped. *Vegetations: seat*—pulmonary valves, mitral valve, left auricle, aorta,