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THE OSLER PATHOLOGICAL COLLECTION IN THE
MEDICAL HISTORICAL MUSEUM OF MCGILL
UNIVERSITY*

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As is well known to all students of his career, William Osler graduated in Medicine from McGill University in 1872, and during the first ten years of his academic life (1874-1884) he filled the appointments here of professor of the institutes of medicine and pathologist to the Montreal General Hospital. In the latter capacity he performed, during this formative and extremely fruitful period, no less than 750 autopsies, every one of which was recorded, mostly in his own hand and with scrupulous exactitude, in four large quarto volumes, two of which are on display today for the inspection of those interested in the Historical Medical Museum of this University. Their pages, written in his own flowing script and clear descriptive style, supply abundant evidence of those qualities of accurate observation, patient attention to detail, orderliness of mind, and insight into essential causes, that combined to make this, the unseen daily task of his youth, the keystone as it were of his immense productivity both in his Canadian period, which was devoted to observations in pathology, and in later life in the field of clinical investigation and nosography. Genius, the genius of the born internist whose impulse is ever to trace the symptom to its underlying cause and to endeavour to establish the etiological significance of observed facts, is written broad upon these pages, so that they who run may read; and its early expression here cannot but awaken a responsive thrill in the heart of all true disciples of the great science of clinical medicine.

With the natural instinct of the collector which was his lifelong characteristic, Osler obtained from most of these autopsies pathological specimens illustrative of the special features of the

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case, and these he carefully stored, duly preserved in alcohol or Sappey's fluid and suspended in well stoppered glass jars, in the historic museum of the Medical Faculty along with many others placed there before his time by the older clinicians of the School. At that period, fifty odd years ago, his collection must have reached relatively large proportions for that of a single individual, judging by the number of specimens he presented before societies or otherwise reported and the many others which he made the subject of exhaustive clinico-pathological studies published in the current periodicals, as well as of repeated references in his *Practice of Medicine* and elsewhere in later years. A statistical study of his literary output made by the writer for another purpose* gives interesting evidence on this point. Thus, of a total of 1,420 published items of all sorts made during the four periods of his career, 26 were on natural science, 429 on pathology (human and comparative), 555 on clinical medicine, 118 were literary papers, 162 on medical education, and 70 on public welfare. Again of these 1,420 items, 414 were published during his Canadian period (1872-1884), as against 372 in his Philadelphia (1885-1889), 313 in his Baltimore (1890-1905), and 321 in his Oxford period. Of the 414 items published in his Canadian period, 79 were major articles or monographs, 221 were pathological specimens presented or autopsies reported and the balance were case reports, notes and comments, editorial matter, published correspondence, etc., and volumes edited, the latter item including the *First Pathological Report of the Montreal General Hospital* (1877), the *Montreal General Hospital Reports Clinical and Pathological* containing his second *Pathological Report of the Montreal General Hospital* (1880), and his *Student's Textbook on Histology* (1880). During his Philadelphia period there were 53 major articles and 57 specimens or autopsies reported and 134 editorials. In his time at Baltimore on the other hand, 205 major articles (including 16 system articles and 7 books) and no pathological specimens or autopsies. These figures, which are shown with other details in two statistical charts here presented, speak for themselves (lantern).†

In the year 1899, when this material came under the personal supervision of the writer as Curator of the McGill Museum, the collection had undoubtedly already dwindled considerably from

*Address on "Osler's Contributions to Heart Disease" presented before the History Section of the College of Physicians of Philadelphia, February 12th, 1934.

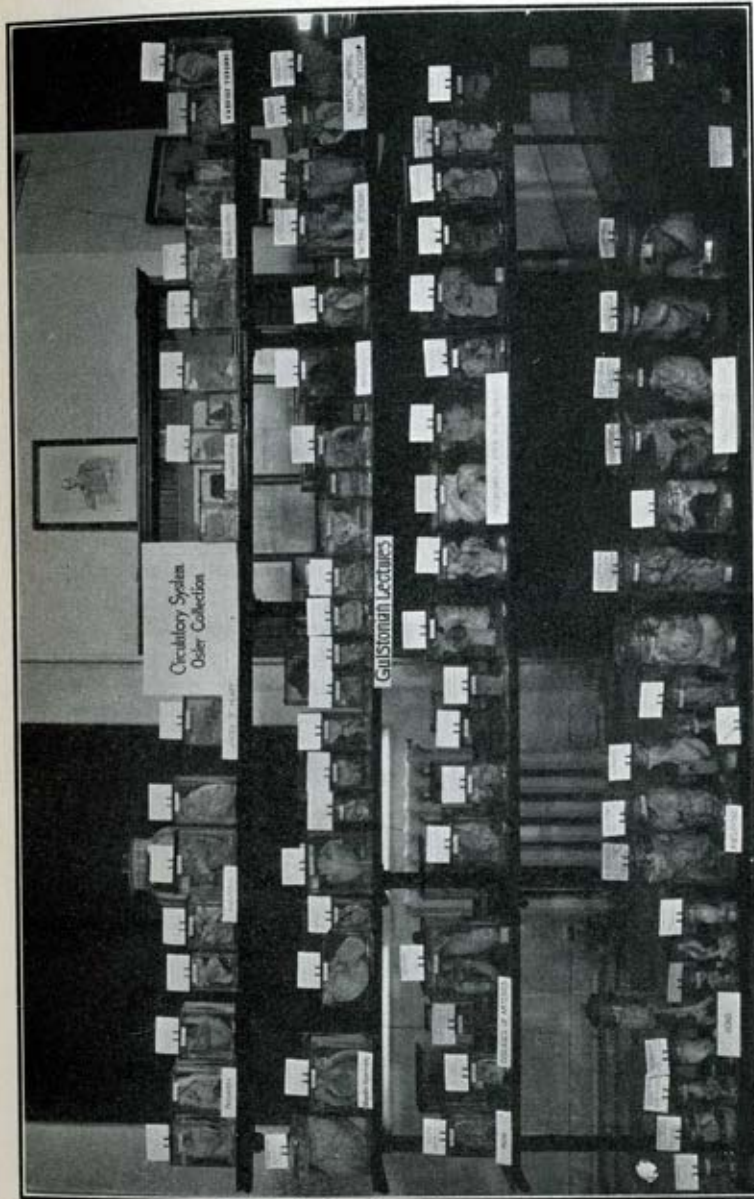
†The above figures are subject to exact revision before publication of these statistical charts in a later communication elsewhere.

its pristine glory. At that time it consisted of perhaps 180 specimens and this number has since been further reduced by losses incurred in the fire of 1907 when the Medical Building was partly destroyed, and in other ways. There still remain, however, upon the Museum shelves, retrieved from disaster and in excellent preservation, no less than 130 of these precious and historic specimens. Most of these have been carefully dissected and chiselled down to show the lesion by the master-hand of their donor and practically all have been the subject of articles or other communications published by him during his Canadian period, reprints of which are on view in a nearby show-case. The cardiovascular system, which may be said to have formed his special field of study during these years, predominates, constituting over half of the collections, but material from all the organs of the body is included, forming a quite representative series of the greatest biographic and bibliographical interest. The greater part of the specimens have recently been remounted on glass frames in square jars by special provision of Dean C. F. Martin, and the entire collection is segregated upon plate glass stands, forming a really spectacular display (see Fig.).

The collection is richest, as indicated above, in the cardiovascular system which presents many features of special interest, alike from the pathological, bio-bibliographic, and historical standpoint (see Fig.). Most important of all in this connection is the series of so-called "*Malignant or ulcerative*" *Endocarditis*. This consists of 15 specimens from the 23 cases used as the illustrative basis of his Gulstonian Lectures¹ on this subject delivered in London in the spring of 1885, in which the fruits of ten years industrious investigation into the morbid anatomy and histology, etiology and clinical course of these conditions were assembled and surveyed, the whole presenting "the first comprehensive account in English of this disease". Most of the cases here cited had already been published elsewhere,^{2,3,4} Osler's first big communication on this subject having been presented before the International Congress of Medicine in London in 1881, and the constancy of "micrococci" in the vegetations commented upon, as well as the tendency to chronicity which was emphasized also in his monograph on "Chronic Infectious Endocarditis" 24 years later.⁵ Of these 15 specimens, beautifully prepared by his own hand, 13 are of the subacute infective "Osler-Libman" type and present the characteristic hall-marks described again by the latter author, who rightly ascribes priority in the delineation of this disease to the great Canadian.

The second important series, larger in point of number of specimens than the above and equally representative of an early research, that remained a life-long interest and was fundamental to his important later contributions on this subject, is that of *Aneurysms*. This undoubtedly constituted one of the largest chapters of Osler's early clinico-pathological experience, and, owing to absence at that period of modern anti-luetic therapy, it was of the most varied and dramatic kind. There are 28 of these specimens (see Fig.) nearly every one of which was published either separately or in other connections. Ten of these were saccular aneurysms of the ascending and transverse arch, in two of which healing⁶ had occurred and the sac was filled with laminated clot, but in 7 rupture had taken place into an adjoining cavity, in 3 instances into the pericardium, in 2 into the trachea, in 1 into the right pleura, and in 1 into the right bronchus. In 5 cases the aneurysm was in the descending thoracic aorta and in 2 of these it had caused pressure on the left bronchus and erosion of the dorsal vertebræ, while in 2 others rupture had occurred, in 1 into the left bronchus and in the other with formation of a false sac into the œsophagus. This latter was a beautiful example of mycotic dissecting aneurysm⁷ and was reported by him with coloured frontispiece in the *International Clinics* for 1903. In addition there is a case of aneurysm of the abdominal aorta involving the origin of the superior mesenteric artery and rupturing into the peritoneum, as well as aneurysms of the innominate, cerebral⁸ (2 cases), hepatic,⁹ pulmonary (2 cases) and common iliac arteries.

Another subject that early caught Osler's attention, that of *cardiac anomalies*, is represented here by four interesting specimens showing (1) premature closure of the foramen ovale; (2) tricuspid stenosis of inflammatory origin in an infant aged four months; (3) pulmonary stenosis with closed ventricular septum; (4) pulmonary atresia with patent ductus arteriosus and ventricular septal defect guarded by a false valve attached by anomalous chordæ; which observations were published with some others in the second M.G.H. Report¹⁰ (1880) and doubtless formed the basis for his monograph on this subject in Keating's *Cyclopædia*.¹¹ Of greater importance in the light of recent researches is a series of cases of "*Bicuspid aortic valve of congenital origin*," of which there are five specimens remaining out of a much larger number which were reported at the time¹² and included in a statistical study¹³ upon 18 such cases, all drawn from his Montreal experience, presented before the inaugural meeting of the Association of



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Cardio-vascular Series: showing specimens of pericarditis, angina pectoris, cancer of heart, bicuspid aortic valve, cardiac anomalies, cardiac thrombi, idiopathic hypertrophy, infective endocarditis, valvular lesions, diseases of arteries and aneurysms.

American Physicians in 1886. In these two communications Osler pointed out and emphatically stressed the frequent incidence of infective processes on or about the malformed cusp, and also established by careful measurements and comparative study of the single and malformed segments, the criteria whereby a congenital can be distinguished from an acquired fusion in so far as this can be determined from the naked-eye appearances. Priority in this observation was wrongly given by Lewis and Grant to Deteindre whose article on this subject appeared nearly ten years after Dr. Osler's classic study.

Two specimens showing *obliteration (a) of the inferior vena cava*¹⁴ and *(b) of the portal vein*¹⁵ are from early observations worked out with care and published at the time in the *Journal of Anatomy and Physiology*. A third case of obliteration of the great veins, this time of the superior vena cava, occurred in 1882 and was reported then and described at length in his large article¹⁶ on this subject published during his Baltimore period (1903), but the early specimen referred to has disappeared from this collection. Other conditions in the cardio-vascular series illustrated here are: *Chronic valvular lesions* (7 specimens, including one of aortic mitral and tricuspid atresia in a case of chorea¹⁷); *Ball thrombus occluding a stenosed mitral valve*¹⁸; *Overstrain of the heart in so-called idiopathic hypertrophy*¹⁹; and the heart in *angina pectoris*²⁰. The last-named subject, which formed a major interest of his later life and was the subject of one of his most important clinical contributions²¹, is represented here by two specimens showing atheroma and thrombosis of the coronaries and extensive myocardial fibroses (healed infarcts) with a typical history of anginal attacks²⁰ during the last years of life.

Among the miscellaneous specimens (other than cardio-vascular) may be mentioned as of special interest three cases of coal-miner's lung,²² an enormous hairball of the stomach forming a complete cast of that organ, the stomach in linitis plastica, a series of cases of gastric ulcer and cancer carefully dissected down in excellent preservation, intestine in typhoid fever, and in lymphatic leukæmia, abscess of the liver in amœbic dysentery²³ (3 cases), suprarenals in Addison's disease, congenital cystic kidneys, staghorn calculi in pelvis of same, actinomycosis in the jaw of a cow, and several other veterinary specimens representative of what was in his time a large and important collection of comparative pathology.

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