

## **Sir William Osler (1849-1919)**

**Charles S. Bryan, M.D., MACP**

Sir William Osler was the most famous physician in the English-speaking world at the turn of the twentieth century. He was a master clinician known especially for an authoritative textbook, *The Principles and Practice of Medicine*, an inspirational speaker, an educator who popularized bedside teaching for medical students, and a public figure who promoted sanitation and tuberculosis control. Although he was among the first to describe the blood platelets and the phenomenon of phagocytosis, and although he made numerous pathological and clinical observations, he made no breakthrough scientific discoveries. His celebrity then and now owes largely to his personal influence and charisma. A medical historian called him “one of nature’s chosen,” adding: “Good looks, distinction, blithe, benignant manners, a sunbright personality, radiant with kind feeling and good will toward his fellow men, an Apollonian poise, swiftness and surety of thought and speech, every gift of the gods was his.” Equally endearing was an impish sense of humor. He did not take himself too seriously.

Osler was born on July 12, 1849, in Canada, the eighth child and youngest son of Featherstone Lake Osler (1805-1895) and Ellen Free Pickton Osler (1806-1907). Featherstone Osler was an Anglican priest. Young Willie showed a marked penchant for mischief. He disrupted a one-room schoolhouse on at least two occasions (once by removing all of the desks and benches and hiding them in the attic and once by locking a flock of geese in the classroom); he struck dead a farmer’s pig with a stone thrown with pin-point accuracy; and he participated in a plot to barricade a disliked housekeeper in her room and then fumigate the room with sulfur. The Reverend William Arthur Johnson, founder of Trinity College School in Ontario introduced Willie to science by taking him along on field trips and then examining their specimens with the microscope. Johnson also encouraged him in the humanities. The title of Osler’s last major address, “The Old Humanities and the New Science,” evinces these lifelong dual interests fostered by Father Johnson.

In 1867 Osler began his higher education at Trinity College, Ontario, with the intent of becoming his family’s contribution to the Anglican clergy, but later transferred to McGill University School of Medicine. There his record was solid but not outstanding. A pivotal event occurred as he was studying for an examination but having trouble concentrating because of self-doubts and anxieties about his future. He chanced to open a volume by Thomas Carlyle, the nineteenth-century Scottish essayist, and discovered this passage: “Our business is not to see what lies dimly in the distance but to do what lies clearly at hand.” Although the message (“Live in the present”) was hardly novel, it made a deep impression and became the basis of Osler’s lifelong philosophy of “day-tight compartments.”

In 1872 Osler received his medical degree and embarked on an 18-month journey to the laboratories and clinics of Europe. In London he worked in the laboratory and it was there that Osler rendered his early description of the blood platelets. He also

studied the methods of the great practicing physicians of that city. In Berlin, Osler met the great pathologist Rudolph Virchow. He later recalled that it was while observing Virchow that he took as his ambition “to be ranked with the men who have done so much for the profession,” the great generalist physicians of the nineteenth century. In 1874 Osler returned to his native Canada where he was briefly engaged in general practice before joining the faculty at McGill as an instructor. Over the next ten years he performed some one thousand autopsies, studied and taught biology, physiology, and pathology, and earned a reputation as an industrious investigator and a dedicated teacher. Elected to the position of attending physician at Montreal General Hospital in 1878, he introduced bedside clinical teaching. His limited outside practice included volunteering for the care of patients with smallpox during an outbreak.

In 1884, in keeping with a phenomenon known in Canada as “the brain drain,” Osler moved to the United States to become professor of clinical medicine at the University of Pennsylvania. The students at McGill, sad to see him go, walked with him to the railroad station. After trying his best to console them, he ended up saying: “Gentlemen—there is no use talking. I must admit that I am leaving McGill for a larger field through ambition.” In Philadelphia he continued to live a semi-monastic life, devoting his efforts almost entirely to the study and practice of medicine and to relating to members of the medical profession. Osler limited his private practice in Philadelphia to consultations, which was unusual for that time, in order to focus on teaching and academic productivity. The bibliography from Osler’s five years in Philadelphia includes 334 items (or nearly one publication every five days), of which 108 were in pathology and 179 in clinical medicine. Many of these publications were brief but some were substantial and indeed definitive, such as the Gulstonian Lectures on endocarditis given in 1885 at the Royal College of Physicians in London. In Philadelphia he also developed his mischievous alter ego, Egerton Yorrick Davis, a nom de plume under which he sent highly fictitious case reports such as “Penis Captivis” and “Peyronie’s Disease—Strabisme du Pénis” to unsuspecting medical journals. In 1889 Osler accepted the offered the opportunity to become professor of medicine at the newly-organized Johns Hopkins University School of Medicine in Baltimore. The Philadelphia medical students, sorry to see him go, asked him to give their valedictory address. Entitling the address “Aequanimitas,” Osler exhorted them to develop imperturbability and its mental counterpart. Osler clearly prized both attributes. He told them: “Cultivate, then, gentlemen such a judicious measure of obtuseness as will enable you meet the exigencies of practice with firmness and courage, without, at the same time, hardening ‘the human heart by which we live.’”

The Johns Hopkins years (1889-1905) mark the period of Osler’s best-known accomplishments. It was at Hopkins that that he consolidated his reputation as a great generalist-consultant and made the transition from promising young academician to senior statesman for medicine. He popularized bedside teaching, writing that in “the natural method of teaching the student begins with the patient, continues with the patient, and ends his studies with the patient, using books and lectures as tools, as means to an end.” He became one of The Four Doctors who propelled the Johns Hopkins Hospital and its medical school to international renown as a model of its kind. The other members of that storied quartet were William Henry Welch (professor of pathology), William Steward Halsted (professor of surgery), and Howard Atwood Kelly (professor of

obstetrics and gynecology). In 1889, however, all of this lay very much in the future. The Johns Hopkins Hospital had opened but funds were insufficient to begin the medical school because of depreciation of the railway stock that constituted the bulk of Johns Hopkins's bequest. Osler saw a "now or never" opportunity to write a textbook of medicine. Delegating responsibility for patients to capable subordinates, he completed the monumental task in 18 months. In retrospect, this was the last definitive textbook of medicine by a single author. Written in a clear and engaging style, it became an overnight best seller and would give its author a steady stream of royalties for the rest of his life.

As his fame spread and as people and especially physicians and their families came to see him, he began to realize the high price of success. In July 1904 Osler was offered the position of Regius Professor of Medicine at Oxford University. The position offered a meager income compared to what he was earning in Baltimore but the administrative, clinical, and teaching responsibilities were light. Recognizing in her husband a severe case of what is now called burnout, Mrs. Osler put her foot down: "Do not procrastinate, accept at once. Better to go in a steamer than in a pine-box." His farewell address entitled "L'Envoi," was given on May 2, 1905. Osler used that occasion to enunciate his three personal ideals: "One to do the day's work well and not to bother about to-morrow.... The second ideal has been to act the Golden Rule, as far as in me lay.... And the third has been to cultivate such a measure of equanimity as would enable me to bear success with humility, the affection of my friends without pride and to be ready when the day of sorrow and grief came to meet it with the courage befitting a man."

Arriving at Oxford on May 27, 1905, Osler quickly made his presence felt throughout that university and indeed throughout Great Britain. He continued to see patients and to write clinical articles, but the main thrust of his activities lay in other directions. He helped start new organizations including the Association of Physicians of Great Britain and Ireland. He helped start new medical journals. He gave philosophical addresses such as "The Faith that Heals," "Man's Redemption of Man," and "Science and War." He reached out to the harried general practitioners in nearby communities. His enthusiastic participation in intellectual matters led to his presidencies of many academic societies. He indulged in his favorite hobby, collecting rare books. When the Oslers moved into a mansion in Oxford, their home quickly became known as "The Open Arms" to visitors from throughout the world.

World War I, or the Great War as it was then known, brought to a halt the Oslers' near-idyllic lifestyle. Osler participated actively in the British war effort. His son, Revere, like most young men his age, answered the call of duty. On August 29, 1917 Revere sustained severe wounds to the chest and abdomen from a German shell and died the next morning. It has been suggested that Revere's death broke Osler's spirit and that he died of a broken heart. However, a biographer, Michael Bliss, concludes that Osler largely recovered from his grief, in part by organizing and annotating his 7,783 books. On October 16, 1919, Osler developed a pneumonia complicated by empyema. He died of hemorrhage into the chest cavity on December 29, 1919.

Osler once said that he desired no other epitaph than that "I taught medical students in the wards." His legacy contains some 1,493 bibliographic items, numerous descriptive observations, and several eponymous attributions.

Osler's contributions to infectious diseases include the following (for complete bibliographic citations and commentary, see Golden and Roland [1988]; for sources in the secondary literature see the two volumes by Nation, Roland, and McGovern [2000]).

- Discovery, in 1877, of a unique canine nematode, which was at one time known as *Oslerus osleri*, while investigating an epidemic of bronchitis at the Montreal Hunt Club.
- Description of the prevalence of echinococcosis in North America (1882).
- Description of phagocytes, including experiments in kittens that demonstrated the uptake of India ink particles by phagocytic cells, in 1889, five years before the more definitive studies by Elie Metchnikoff.
- Extensive contributions to our understanding of infective endocarditis, including the historically important Gulstonian lectures given in at the Royal College of Physicians of London in 1885. These contributions include not only the familiar "Osler nodes" but also the predisposition of bicuspid aortic valve to endocarditis, "Osler's tetrad" (pneumococcal endocarditis associated with alcoholism, pneumonia, and meningitis), and an account of chronic endocarditis (1908-1909).
- Confirmation of the work of Lavarán demonstrating the presence of malarial parasites in blood (1886). • Early studies of the use of antipyretics (1887).
- Contributions to the literature on pneumonia, especially of pneumococcal pneumonia associated with alcoholism (1887).
- Elucidation of the pathophysiology of sepsis caused by biliary obstruction (Charcot's intermittent fever), including the phenomenon (sometimes called Osler's syndrome) of fever and paroxysmal chills caused by a single impacted gallstone above the orifice of the common bile duct (1897).
- Demonstration of the association of peritonitis with perforation of the appendix prior to the definitive elucidation of acute appendicitis by Reginald Fitz.
- Extensive contributions to the literature on tuberculosis including the anatomical tubercle (1889), tuberculous peritonitis (1890), tuberculous pleurisy (1893), tuberculous pericarditis (1893), and the role of sanitoriums.
- Extensive contributions to the literature on typhoid fever, including its epidemiology (1881 and afterwards) and the importance of public hygiene and water supplies for its control (1889 and afterwards).

According to one tabulation (Bryan, 1996), Osler made 298 contributions to the literature on infectious diseases of which 60 dealt with tuberculosis, 54 with typhoid fever, and 40 with pneumonia.

For many, Osler's most important legacy consists of his frequent reminder that humanism and the humanities should always inform science and technology. It was to that end that Osler told medical students: "Start at once a bed-side library, and spend the last half-hour of the day in communion with the saints of humanity."

## **Selected Reading**

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