Francis Xavier Dercum: a man for all seasons

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Abstract

Francis Xavier Dercum (1856–1931) is known primarily for his prominence in the field of neurology and for his identification of “Adiposis Dolorosa”, known as Dercum’s disease. His brilliance, however, exceeds well beyond neurology. Born and raised in Philadelphia to parents of American and European descent, Dercum’s natural curiosity oriented his interests toward medicine and philosophy. His scholarship flourished, and much recognition came his way. He died in Benjamin Franklin’s Chair, closing what would be his last session as President of the American Philosophical Society. From anatomy, histology, pathology, and neurology to teaching, writing, and philosophy, Dercum’s life was that of a man for all seasons.

Introduction

Francis Xavier Dercum was an internationally recognized neurologist, a pioneer in the field and the first to describe “Adiposis Dolorosa”, a syndrome others would call Dercum’s disease. Dr. Dercum might be disappointed if this were to be his legacy, for there was so much more to his life. His illustrious achievements in anatomy, histology, pathology, natural sciences, philosophy, mental health, education, and scholarship easily eclipse his discovery of the disease that bears his name. He was multidisciplined but his interests were far-reaching. He was a man for all seasons.

Dercum’s Disease

The disease was discovered while Dercum was at Jefferson Medical College in 1892. He recognized the similarity of three unrelated clinical cases from various “nervous wards” in Philadelphia. He described these patients as follows:

“To begin, the enlarged tissue makes its appearance in a very irregular way. Nodules of soft tissue are, at first, deposited in some one situation, or perhaps in corresponding places of the upper or lower extremities. For a time, the deposit is limited to these original areas, but subsequently it makes its appearance elsewhere, and may become very extensive. Regions, however, may exist which remain permanently uninvaded. … Not only is the development of the enlargement irregular and even capricious in these cases, but there is, in addition, another important fact to be remembered, and that is: at some time or the other the enlargement is accompanied by pain or other nervous symptom. … It would seem then, that we have here to deal with a connective-tissue dystrophy, a fatty metamorphosis
of various stages of completeness, occurring in separate regions, or at best unevenly distributed and associated with symptoms suggestive of an irregular and fugitive irritation of nerve trunks—possibly a neuritis. Inasmuch as fatty swelling and pain are the most prominent features of the disease, I propose for it the name Adiposis Dolorosa.”

French writers renamed adiposis dolorosa, using “Maladie de Dercum” in honor of its discoverer. English-speaking countries later referred to it as Dercum’s disease. Since the “curious syndrome” was described, it has been classified as a rare disease by the National Organization of Rare Disorders, or NORD. Although the prevalence of Dercum’s disease in the United States remains unknown, Sweden has recorded in excess of 10,000 cases. Additional evidence suggests that Dercum’s disease is inherited from a “dominant gene with variable expressivity” and affects women 20 times more commonly than men. Some if not many reports describe single cases, most without genetic investigation.

After the characterization of Dercum’s disease in 1892, more effort has gone into its revision. Currently, the definition includes four criteria: (1) multiple painful fatty masses; (2) generalized obesity, usually in women of menopausal age; (3) asthenia, weakness, and fatigability; (4) mental disturbances, including emotional instability, depression, epilepsy, mental confusion, and true dementia. Diagnosis of the disease is clinical. Although it was once theorized that there might be genetic markers that would help with its identification, measurement of specific neuropeptides associated with pain of unknown etiology are poor indicators for specificity.

Although the pathophysiology remains unclear, the treatment of adiposis dolorosa is largely symptomatic. Pain relief proceeds first medically, then surgically. Pharmacological treatment includes local anesthetics and systemic analgesics. Prednisone is used with caution because paradoxically it has been thought to induce the disease in at least one case. Surgical treatment of the disease is primarily liposuction, which provides short-term relief. Depression, a common accompaniment, indicates psychotherapy.

Early Years

Francis Xavier Dercum was born on 10 August 1856 in Philadelphia, Pennsylvania to Ernest Albert and Susanna Erhart Dercum. His paternal ancestors were of English descent and as devout Catholics during the reign of Henry the VIII and the Reformation, they migrated to southwestern Germany’s “Rhenish Palatinate” for religious freedom. Subsequent generations of Dercums graduated from the University of Wurzburg as physicians, lawyers, and scientists. The contributions of Antonius Dercum (1694–1752) and his son, Philip Valentinus Dercum (1728–1757), toward natural science and medicine are archived in the Surgeon General’s Library in Washington, D.C. Ernest A. Dercum (1823–1899) of Stuttgart was a leader of Germany’s Revolution in 1848. Threats to his life forced him to flee his homeland and he found refuge with relatives in Pennsylvania. There he met and married Susanna Erhart (1834–1866), an “American girl of Alsatian extraction.”

The Dercums built a home in Philadelphia and Ernest became a successful merchant of books and grain. His son, Francis, attended public schools and graduated from the University of Pennsylvania in 1877, earning doctoral degrees in medicine and philosophy at age 21. He entered private practice, but continued pursuit of scholarship. Multiple publications, to be detailed subsequently, earned his membership in the Academy of Natural Sciences (Philadelphia) the following year.

Dercum and several colleagues founded the Philadelphia Neurological Society in 1884—the same year he became Chief of Clinic and Instructor in Nervous Diseases at the University of Pennsylvania. Just 2 years later, he became President of the American Neurological Society. Subsequently, in 1892, he became President of the Philadelphia Neurological Society and the first “Chair of Nervous Diseases” at Jefferson Medical College. His chairmanship included an appointment as Clinical Professor and shortly thereafter, in 1900, Professor of Nervous and Mental Diseases until his retirement as Professor Emeritus in 1925.

Dercum had become a world-renowned physician. His reputation extended to Europe, with membership in The Royal Medical Society of Budapest (1909), The Neurological Society of Vienna (1911), The Societe de Neurologie de Paris (1908), and The Royal Medical Society of Great Britain (1927). For his many accomplishments, France awarded him its Legion of Honor in 1922.

Dercum’s reputation was such that he became personal physician to famous individuals. He treated Ms. Ima Hogg, first lady of Texas in 1918, for severe depression. The following year, President Wilson suffered a stroke. At the time, common perception of stroke was shifting from a psychological phenomenon to a nervous disorder. As a nationally known neurologist, Dercum was summoned to the White House to treat the President and he remained Wilson’s personal physician until his death in 1924.

A Man for All Seasons

Dercum was an unusual physician. He was extraordinarily diverse in his mastery of multiple arts and sciences—he
wore many hats, so to speak. His expertise was not limited to scholarship in the fields of anatomy, histology, pathology, natural sciences, mental health. To these scientific disciplines are added expertise in teaching, writing, and philosophy.

**Scientist**

From an early age, Dercum was inquisitive. His curiosity led him to ichthyological nervous systems, human anatomy, and ultimately to medical school. He continued his scientific studies in medical school and, as the result of his vast knowledge and teaching skills, he was appointed demonstrator for histology and physiology while a student at the University of Pennsylvania. His quest did not end there, however. Throughout his clinical career, he was “… engrossed in scientific investigations in the causes and nature of pathological and physiological phenomena”. He became interested in seizures, leading to his paper, “Artificial Induction of Convulsive Seizures” (1884). The study became a critical component of the famous photographs of Eadweard Muybridge (1830–1904) termed “Animal Locomotion” (1885), the first motion picture series of neurological disorders ever filmed. It was during this time that Dercum became Pathologist to the State Hospital for the Insane in Norristown, Pennsylvania. His interests in neurology and pathology led to his extensive study of mental health.

**Teacher**

Throughout his adult life, Dercum was an enthusiastic educator. His love for the sciences was disseminated through his teaching. One of Jefferson’s medical students, Tom Bentley Throckmorton (1885–1961), applauded Dercum’s “…ability to engage the attention of the students and then to hold it, seemed almost uncanny.” He added that Dercum “…pointed out and then analyzed with such clarity of thought and logical deductions as to hold the listeners spellbound”. Throckmorton later became a well-known surgeon and Governor of Iowa from 1927 to 1936.

**Writer**

Dercum imparted his extensive knowledge to the world through writing. During his long career, he published over 200 papers, an unusual feat in Dercum’s day. His earliest contributions include: “The Sensory Organs, Suggestions, with a View to Generalization” (1878) and “The Morphology of the Semicircular Canals” (1879). These works reflect his interest in comparative anatomy, which he frequently used in his study of the nervous system. Over Three decades later, Dercum summed up his inven-

Figure 2. Dercum Family Coat of Arms, Stuttgart, Germany, the motto of which is “Verminst adelt nicht Geburt” that translates to “Service, not birth, ennobles.”

Tory of therapeutic methods in Rest, Suggestion, and Other Therapeutic Measures in Nervous and Mental Diseases (1917), designed to ameliorate the symptoms of nervous disorders. It received many accolades. In the Biology of Internal Secretions (1924), a contemporary text of “endocrinology”, Dercum describes insulin and diabetes, in the chapter on the pancreas, only 2 years after insulin’s isolation. Other notable publications include A Clinical Manual of Mental Diseases (1913), and The Physiology of the Mind (1922).

The Physiology of the Mind (1922) was a pioneering treatise. Dercum interpreted the mind chemically, biologically, and physiologically. He compared nervous processes of animals, beginning with unicellular life forms and expanding phylogenetically up to humans. The discussion exemplified his comprehensive knowledge of the nervous system, while the second half of the text is dedicated to a controversial topic: consciousness. Psychologists, particularly Locke and Berkeley, had made generalizations based on observations. Dercum, however, attempted to analyze consciousness in terms of anatomy and physiology as a structuralist. In so doing, he was of course hypothesizing because it was a challenging task to prove through science. For example, he theorized that the symptoms of hysteria are caused by “retraction of the processes of the neurons”. Interestingly, in the end, his concept of
the physiology of consciousness matched the theoretical propositions of Berkeley: we are only conscious of our own mental processes.22

**Philosopher**

In 1877, Dercum earned a Doctorate of Philosophy, in addition to his Doctorate of Medicine. He was conferred membership in the American Philosophical Society in 1892. It should be remembered that, “The American Philosophical Society is not concerned with philosophy in the traditional sense but rather “natural philosophy,” as Benjamin Franklin understood it: practical knowledge about the world and human beings in it, which included science, technology, agriculture, and ethnology. Dercum was elected a member for his scientific achievements.22 His most notable accomplishments for the Society were securing funds for its new building and formulating a survey of mankind’s intellectual progress.2 In addition, he published four papers in the Proceedings of the American Philosophical Society: “The Origin and Activities of the American Philosophical Society,” “The Dynamic Factor in Evolution,” “On the Nature of Thought and its Limitation,” and “Non-Living and Living Matter.”2 In 1927, Dercum became President of the American Philosophical Society, a position he graced with leadership, scholarship, and diligence for 4 years.

**The Chair**

On 23 April 1931, Francis Xavier Dercum closed a meeting of the American Philosophical Society, of which he was President for a second term. As he sat in Benjamin Franklin’s famous library ladder chair, among his illustrious colleagues, his life came to a sudden end. He slumped forward and died, with what was presumed to be a fatal heart attack. Referred to as a scientist would wish”.12 Dercum lived a life full of knowledge and discovery that ended poetically. His scientific and literary contributions to the medical community are exemplary, and his principles of life are admirable. He is the quintessential role model. The Dercum Coat of Arms succinctly summarizes Dercum’s life and mind: “Service, not birth, ennobles”.11

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**Conflict of Interest**

None declared.

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