

**BURRILL BERNARD CROHN (1884-1983): THE MAN BEHIND THE DISEASE***Burrill Bernard Crohn (1884-1983): o homem por trás da doença*Fábio Guilherme M. C. de **CAMPOS**<sup>1</sup> e Paulo Gustavo **KOTZE**<sup>2</sup><sup>1</sup>Colorectal Surgery Division, Gastroenterology Department. Hospital das Clínicas, University of São Paulo Medical School, Brazil; <sup>2</sup>Colorectal Surgery Unit, Cajuru University Hospital, Catholic University of Paraná, Curitiba, PR, Brazil

**B**urrill Bernard Crohn was born in June 13<sup>th</sup>, 1884, in the city of New York. From a family of Jewish emigrants from Europe, Theodore and Leah Crohn had 12 children, educated as Jewish orthodoxy, still spread over the generations<sup>5</sup>.

In New York, he attended City College (Class of 1902) where his interest for the medical career was born. According to his own biography, he decided to follow the medical pathway because his father used to have terrible digestion problems; so, he chose to help him by studying medicine. He received his medical degree at Columbia University's College of Physicians and Surgeons (1907), at the age of 23<sup>3</sup>.

At this University, Crohn developed many experimental researches concerning intra-abdominal hemorrhage, for what he gained an M.A. and a PhD in addition to his M.D degree. However, he felt obliged to decline the first two degrees, because of their price at that time (US\$35), and he did not wish to ask his father for the extra money<sup>8</sup>. After this period, he was admitted as one of the 120 candidates for eight positions as an intern at Mount Sinai Hospital. Crohn had spent two and a half years at this position, a mixed rotation for surgery and medical diseases, and an extra year of pathology, mentored by brilliant Dr. Emanuel Libman (1872–1946). He believed that this rotation at the pathology department gave him the proper balance of combined scientific laboratory and clinical medicine<sup>8</sup>.

Most of his medical activities were developed in Mount Sinai Hospital. He joined this hospital as an intern in pathology, then as assistant in pathology and then physiological chemistry from 1911 to 1923. Finally, Crohn joined the clinical staff in 1926. As a local general practitioner, he referred most of his patients to Mount Sinai, today known as a prestigious teaching and postgraduate hospital<sup>3</sup>.

One curiosity of those old days was that Crohn was married to Lucile Pels in 1912, having two children, Ruth (born in 1912) and Edward (born in 1917). However, without having any time for the family - mainly because of daily house calls almost every evening and his dedication to "Affections of the Stomach", published in 1928 -, they had to dissolve their marriage by divorce<sup>8</sup>.

His special interest in bowel diseases is demonstrated in his biography: "It has been my misfortune (or perhaps my fortune) to spend most of

my professional life as a student of constipation and diarrhea. Sometimes I could wish to have chosen ear, nose and throat as a specialty rather than the tail end of the human anatomy..."<sup>3</sup>.

Gastroenterologists existed much earlier than gastroenterology was recognized, and defined as one of the internal medicine's specialties. That was what happened with Crohn, as most of the digestive diseases wards were in held of surgeons at that time. He was only recognized as a full member of the American Gastroenterological Association (AGA) in 1917, mentored and helped by William J. Mayo, who was introduced to Crohn by Dr. Libman<sup>8</sup>. After that, he spent some years until 1921 studying the functions and the diseases from the pancreas. He studied normal function of the pancreas using himself as a volunteer, by swallowing a 36-inch rubber catheter and studying the aspirated pancreatic secretions after having a glass of milk<sup>8</sup>.

Much of his dedication to treat inflammatory bowel diseases also came from the close friendship with Dr. Jesse Shapiro (working at the Mount Sinai Hospital), also diagnosed with the disease in himself. Another reason was that his hospital used to admit lots of Jews, who have a higher incidence of the disease. For all these continuous efforts, he was nominated the first chief of Mount Sinai's Gastroenterology Clinic and continued associated with Mount Sinai for 60 years, where generations of physicians developed a special interest in inflammatory bowel diseases, until today<sup>8</sup>.

In the beginning of the 20<sup>th</sup> century, the eminent surgeon Dr. A. A. Berg stimulated his assistant Leon Ginzburg (a clinical professor of surgery) and his colleague Dr. Gordon David Oppenheimer (consultant physician and surgeon), to study inflammatory granulomatous diseases of the bowel. These investigators started a project to describe and categorize specimens of bowel tumors and strictures. As some specimens did not fit any previously symptoms patterns, they presented their results to Burrill B. Crohn, who had previously collaborated with Dr. Berg. Actually, it was Dr. Berg who stimulated Crohn, Ginzburg and Oppenheimer to join their efforts and case series in order to achieve a significant sample of patients to develop the final presentation and publication of one study<sup>4,8</sup>.

Crohn wrote a letter for the American

Gastroenterological Association: "I have an important scientific contribution I would like to present before the AGA meeting next May. I have discovered, I believe, a new intestinal disease, which we have named terminal ileitis. I should like to present the facts before the association in the abstract in a separate sheet. My very kind regards..."<sup>8</sup>.

After Crohn has added some interesting ideas to this work, Ginzburg presented a paper to the American Gastroenterological Association, named "Non-specific Granulomata of the Intestine," on May 2<sup>nd</sup>, 1932, in Atlantic City. Right after that, he documented 14 cases in a paper entitled "Terminal Ileitis: A new clinical entity" to the Gastroenterology Section of the 83<sup>rd</sup> American Medical Association Meeting, on May 13, 1932. As Dr. Berg refused to be included as the first author (actually he requested no citation of his name in the paper), Crohn, Ginzburg and Oppenheimer published their seminal paper at the JAMA, and the name of the disease was changed to "Regional Ileitis: A Pathologic and Chronic Entity"<sup>2,6</sup>.

Crohn believed that the disease was confined to the distal part of the small intestine, but regional ileitis was preferred instead of terminal ileitis to avoid confusion of the word "terminal" and its health status related to agony and death. This suggestion was made by J. Arnold Burger, and promptly accepted by the authors<sup>3</sup>. "Crohn's disease" became the name by which terminal or regional enteritis was commonly known, because he was responsible for the presentation to the audience and to the fact that his name was the first one in alphabetical order for the publication.

Burrill Crohn never named the disease with his surname in his presentations and articles, always preferring the term regional ileitis. He was also reluctant to accept the colonic commitment by the same disease and was against an official resolution during a Conference in Prague, through which regional ileitis was designated as Crohn's Disease. Besides that, his objection was denied. Concerning this issue, Crohn wrote: "British clinicians insist on calling this newer malady 'Crohn's disease of the colon', this over my off-stated reluctance to the use of my name for a second disease. They explain and insist that the use of my name signifies clearly, to their students, the pathological nature of the disease as allied to regional ileitis, namely, a granulomatous disease process"<sup>3</sup>. In fact, Crohn believed that patients with regional ileitis tended sometimes to have a concomitant inflammation of the colon, and believed that ulcerative colitis could occur simultaneously with regional ileitis.

The history tells that manifestations of supposed Crohn's disease have been reported as early as 850 A.D. when King Alfred, "England's darling", suffered from an illness which caused pain on eating and discomfort, as well as perianal fistulas. At that time the illness was thought to be a punishment for the King's sins. In retrospect, however, the condition was probably

Crohn's disease<sup>1</sup>. In fact, one of the first descriptions of regional ileitis is attributed to the Italian physician, anatomist and pathologist Giovanni Battista Morgagni from Padova, in 1761. In the UK, Coombe and Saunders described in 1813 a "singular case of stricture and thickening of the ileum", while the great pathologist Rudolph Virchow, from Berlin, had obviously seen the condition and described an "inflammatory fibrous colon tumour" in 1853<sup>1</sup>.

Moreover, T. Kennedy Dalziel reported 13 patients who had suffered from intestinal obstruction in the British Medical Journal in 1913. These patients had inflamed gut with transmural involvement. This is considered to be the most complete report of Crohn's disease before the landmark paper from the Mount Sinai in 1932. Within the same context, the famous chairman from Leeds Lord Berkeley George Andrew Moynihan actually described nonspecific ileitis in 1907, according to Marvin Corman<sup>4</sup>. This author stated that, "without denigrating the work of Crohn and others, one wonders if the condition should be called Moynihan's disease".

Otherwise, the essential work that led to the recognition of the disease was the classic paper from 1932, in which Crohn and his colleagues put this pathological and clinical entity onto the map<sup>7</sup>. Otherwise, the authors emphasized that previous cases were mostly diagnosed as intestinal tuberculosis. Actually, his British friend Brian Brooke, a surgeon from London, used the term "Crohn's disease" in his editorials at the Lancet, and helped to spread the famous eponymous<sup>8</sup>. It was clear in most of these historic reports that Crohn never felt comfortable with his famous eponymous.

During his long life, Burril B. Crohn received numerous homages. In 1932, he was elected President of the American Gastroenterology Association (AGA). He was also honored with the Townsend Harris Medal by the City College (in 1948), with the Julius Friedenthal Medal from the AGA (in 1953) and the Jacobi Medal from the Hospital Mount Sinai (in 1962)<sup>3</sup>. He also authored four books and over 150 articles. Among these many publications, he made his own biography in 1927<sup>3,8</sup>.

As a respected gastroenterologist, Crohn received numerous patients from all over the USA, as well as from abroad, during his career. He practiced medicine until he was in his nineties. After his retirement, he lived in New York and used to visit a country home in New Milford, Connecticut, where he met his second wife, Rose Blumenthal Elbogen, to whom he married in 1948<sup>8</sup>.

Crohn was particularly interested in the History of the American Civil War. He was a soft-spoken, modest, universally admired physician who well deserved to be remembered. He knew how to be a scientist without forgetting the human side of medical practice. During the 100<sup>th</sup> year of his remarkably productive life, Dr. Crohn's colleagues, patients, friends and family

suggested the creation of a foundation for research in Crohn's disease. Thus, the Burrill B. Crohn Research Foundation was established at Mount Sinai Hospital in his memory.

He died in Connecticut at the age of 99 on July 29<sup>th</sup>, 1983. His passing will be completing three decades this year, and for this reason ABCD and these authors decided to write this text in honor of his memory and his enormous contributions to the study of inflammatory bowel diseases. By doing this, we aim that internists and young physicians who work in the field of gastroenterology and colorectal surgery know a little bit more about the man behind the disease, as well as his impressive dedication to the development and advances of digestive diseases.

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