

C 3.1. COMMUNICATION – FULL ARTICLE

Notes on the History of Neurology in Northern Portugal

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ABSTRACT: Before the establishment of the Portuguese Republic, Ricardo Jorge, Magalhães Lemos, Júlio de Matos and Lopes Martins were renowned physicians involved in Neurology in Northern Portugal. However, academic chairs of Neurology and Psychiatry were only formally established under the Republic. Subsequently, other important figures emerged, including Corino de Andrade and Celso Cruz.

In this article, the author, a practicing neurologist, highlights the curricula of these pioneers, with additional comments on the academic and hospital care development backgrounds.

KEYWORDS: Neurology; History of Medicine; Northern Portugal; Pioneers

INTRODUCTION

From the dawn of time until the second quarter of the 19th century, references to neurological sciences were scattered and scarce. Then, crucial steps were taken in Neurology: Charcot described Parkinson's disease (1817), amyotrophic lateral sclerosis (1825), and multiple sclerosis (1865); Broca (1861) and Wernicke (1874) identified areas of the brain responsible for language; and Ramón y Cajal described neurons and dendrites (1888).

In Portugal, Passos Manuel, in 1836, by decree, reformed the national education system and transformed the Royal School of Surgery into the Medical-Surgical School. Between 1836 and 1911, the identifiable neurologists were Ricardo Jorge, Magalhães Lemos, Júlio de Matos, Lopes Martins, among others. In 1911, after the establishment of the Republic, the Faculty of Medicine was founded, and the inclusion of Neurology and Psychiatry courses in its curriculum was then established. In Porto, the Medical School was located at the Hospi-

tal de Santo António building and remained there until 1959, when it was moved to the new Hospital Escolar S. João (S. João University Hospital).

Here are some highlights from the profiles of the main Northern Portugal Neurology pioneers in the XIX-XX centuries and their backgrounds.

RICARDO JORGE

Ricardo Jorge was born in Porto on May 9th, 1858. He studied at Colégio da Lapa and graduated from the Porto Medical-Surgical School in 1879, presenting a dissertation with a charismatic title: 'An Essay on Nervousness' (Jorge R – *Um ensaio sobre o nervosismo*. Tese. Porto, 1879). In May 1880, he applied for a teaching position at the Porto Medical-Surgical School, presenting the dissertation 'Motor Locations of the Brain', following which he was appointed on April 27th, 1881. He made several trips to Strasbourg and Paris, where he attended Jean-Martin Charcot's lectures, seeking in the local

hospitals a learning experience impossible to acquire in Portugal, where neurological knowledge was still in its infancy.

In 1883/1884, upon returning from an internship abroad, he opened a 'Course on the Anatomy of the Nervous System' and a free course on Neurology. At that time, he published work related to nervous diseases. In 1884, he abandoned Neurology and began to dedicate himself to Public Health. With his work "Social Hygiene Applied to the Portuguese Nation", a series of lectures published that same year, he introduced a new perspective on addressing public health issues in Portugal, which would elevate him to an important career as a hygienist and researcher, with a significant influence on health policies in Portugal.

He was the main author of the sanitary measures taken to combat the plague that ravaged the city. These measures did not please the merchants and journalists of Porto, who pursued and threatened him with death, leading him to abandon the city and his neurological studies. Ricardo Jorge then moved to the school in Lisbon, where he assumed the Chair of Public Hygiene and Legal Medicine.

In 1883, the Hospital de Alienados (Mental Hospital) do Conde de Ferreira was opened in Porto. It was the first Portuguese institution built from the ground up for Psychiatry and the result of Joaquim Ferreira dos Santos' legacy. There, the study of Neurology and Psychiatry was established and, as clinicians, Magalhães Lemos and Júlio de Matos were admitted.



Fig. 1 – Ricardo Jorge (reproduced from Pinto, 2009).

MAGALHÃES LEMOS

António de Sousa de Magalhães Lemos was born at Casa do Curral, in Margaride, Felgueiras, on August 18th, 1855. He did his studies in Braga and then in Porto, where he graduated in October 1882 from the Porto Medical-Surgical School, with a thesis entitled "The Psychomotor Region: Notes for the Study of its Anatomy". Magalhães Lemos applied in 1883 to the Conde de Ferreira Hospital, which, as already mentioned, had just opened, and was accepted as an assistant physician.

On February 15th, 1887, he was appointed Assistant Lecturer for the 7th, 8th, 9th, 10th, and 11th chairs at the Industrial and Commercial Institute of Porto. He taught at this institution until 1929. In 1889, he published "General Paralysis", a dissertation required for his admission to the Porto Medical-Surgical School. In 1890, he created a Clinical Course on Mental and Nervous Diseases at the Conde de Ferreira Hospital. At Conde de Ferreira Mental Hospital, on May 12th, 1892, he assumed duties as an Associate Physician and later as director, a position he held until 1928.

In 1911, he was appointed the first Professor of Neurology at the Porto Faculty of Medicine, and in 1921, he was assigned to the Chair of Psychiatry. He participated in multiple scientific meetings and was Honorary President of the Neurology and Psychiatry Section of the International Medical Congress in Paris. He wrote several scientific works, including "Hallucinations de l'ouïe" (Paris, 1912) and "Psychiatry and Neurology in Porto: History and Current State of Its Teaching" (Por-



Fig.3 – Magalhães Lemos (extracted from the site of Câmara Municipal de Felgueiras – Felgueiras City Council) <https://cm-felgueiras.pt/viver/cultura/historia-e-patrimonio/figuras-ilustres/>

to, 1925). The national and international recognition of his life and work was reflected in the distinctions he received. He was an honorary member of the Lisbon Academy of Sciences, a member of the Society of Medical Sciences and of the Institute of Coimbra, a corresponding member of various international scientific institutions, a knight of the Legion of Honor, and an officer of Public Instruction of France. In 1927, he bequeathed his house and adjacent lands to the Faculty of Medicine of the University of Porto, which served as the foundation of the Magalhães Lemos Dispensary.

JÚLIO DE MATOS

A renowned psychiatrist and one of the most important reformers of psychiatric education in Portugal, Júlio Xavier de Matos was born in Porto on January 26th, 1856 and died in Lisbon on April 12th, 1922. He graduated in 1880 from the Porto Medical-Surgical School by presenting a thesis on hallucinations. He was admitted to the Conde de Ferreira Mental Hospital at the time it opened and, since 1890, he assumed its direction. In 1908, Júlio de Matos was invited to give courses on Psychiatry and Neurology at the Porto Medical-Surgical School and, in 1911, when the School was elevated to the status of a Faculty of Medicine, he was nominated Professor of Psychiatry.

Distinguishing himself in the fields of alienism and forensic psychiatry, Júlio de Matos moved to Lisbon in 1911 when he was appointed to the Chair of Psychiatry that became vacant there and to serve as director of Rilhafoles Hospital. Although mainly linked to

Psychiatry, on their own initiative, Júlio de Matos and Magalhães Lemos gave Sunday lectures on Neurology and Psychiatry to the general public.

LOPES MARTINS

João Lopes da Silva Martins Júnior was born (1866) and died (1945) in Porto and graduated in 1888 with the dissertation '*Hysteria and its motor locations*' (study of semiology). In 1895, he presented the dissertation entitled '*Epileptics in Medicine*' in the competition for a teaching position at the Porto Medical-Surgical School. He taught the Auxiliary Course of Medical Propedeutics during the academic years of 1895 to 1900, 1903 to 1906, and 1907 to 1910, and also the Course of Neuro-pathology and Psychiatry (between 1895 and 1898) on a pro bono basis.

In 1903, he founded and directed the Museum of Hygiene at the Porto Medical-Surgical School. In 1911, at the now Faculty of Medicine of the University of Porto, he was appointed ordinary professor of the 5th class – History, Bacteriology, and Parasitology.

Lopes Martins, while being an officer in the Portuguese Army, served as physician and professor of Medicine at the Porto Medical-Surgical School, but also as director of the Faculty of Medicine and vice-rector of the University of Porto (1922–1923) and later rector of the same university (1927–1928). In 1918, with the appointment of psychiatrist José Fernandes de Magalhães to the Chair of Neurology, the individuality of the neurology chair was lost. Following a period during which psychiatrists taught Neurology in 1923, under Gonçalves Azevedo, First Assistant of the Faculty of Medicine, its subjects were taught as a Course in Neurological Propedeutics. In 1925, the Chair of Neurology was entrusted to the First Assistant, Jorge de Azevedo Maia. He would remain in charge of the course for the next 16 years. However, it was difficult for Neurology in Porto to acquire a status of citizenship. In 1928, the Regulations of the Faculty of Medicine of Porto, within the general framework of the courses offered, which included Psychiatry, placed Neurology as an ancillary discipline. It was evidence of the degree of inferiority that this specialty had at the Medical School of Porto.

From 1941 to 1957, Ferraz Júnior was appointed by the School Council of the Faculty of Medicine of Porto to teach Neurology. His doctoral thesis, *Functional Exploration of the Liver* (1935), would not have predicted his later affinity for Neurology. In 1957, Emídio Ribeiro assumed the Chair of Medical Propedeutics, succeeding

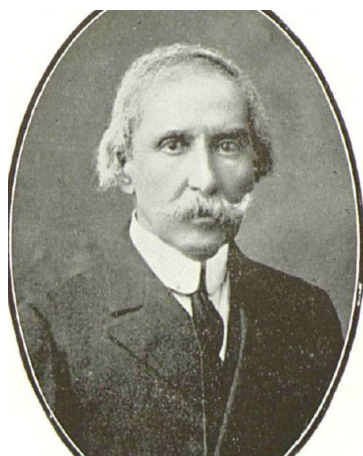


Fig. 2 – Júlio de Matos (reproduced from Anuário da Faculdade de Medicina do Porto XIV, 1928).

Ferraz Júnior. Professor Emídio Ribeiro was my professor of Neurology and, later, in the 1970s, he entrusted Neurology to Celso Cruz, a trained neurologist. At the two main hospitals in Porto (Santo António Hospital and São João Hospital), Departments of Neurology were then structured by Corino de Andrade and Celso Cruz.

CORINO DE ANDRADE

Corino de Andrade was born in Moura on June 19th, 1906 and graduated in 1929 from the Faculty of Medicine of Lisbon. Following this period, he worked with recognized doctors, such as Mário Moreira at Santa Maria Hospital, while training in surgery at Arroios Hospital with Azevedo Gomes. When he finished his course, he was introduced to António Flores (a distinguished neurologist and psychiatrist in Lisbon) and decided to become a neurologist. He then began an internship under Egas Moniz while assisting Gentil Martins in surgeries.

Following a recommendation from António Flores, he went abroad and, in 1938, he returned to Portugal from Strasbourg, where he had spent seven years working with Barré, and from Germany, where he had worked with Oscar Vogt. Egas Moniz and António Flores directed him to Porto, where he first worked at Hospital Conde de Ferreira but shortly thereafter moved to Hospital de Santo António. In 1940, he was invited by the director of Hospital de Santo António to head the Neurology Department, which, at that time, consisted of himself and João Resende. In 1941, he started an outpatient Neurology clinic, where he received his first patient from Póvoa de Varzim with Familial Amyloid Polyneuropathy.

In 1942, responding to a perceived need, Corino began performing neurosurgical procedures with the help of Fernando Magano, Sousa Pereira, and Oliveira Santos, all renowned general surgeons. In 1952, he published an article on Familial Amyloid Polyneuropathy (*Brain* 1952; 75: 408–27). That same year, he was arrested by the PIDE (Polícia Internacional de Defesa do Estado, the Portuguese security and political police) and was imprisoned for several months for alleged “subversive activities and links to the Communist Party”.

At the hospital, he gathered as collaborators, besides João Resende, Jorge Campos (who later went on to practice Neurology in Mozambique); Pereira Guedes (one of the most qualified anatomopathologists in Porto); António Coimbra (neuropathologist, histologist

and professor at the Porto Faculty of Medicine); Castro Alves (an intelligent and irreverent psychiatrist); and Rocha e Melo (whom he convinced to pursue neurosurgical training in Edinburgh because he believed it would become one of the most sought-after specialties in the future). When Rocha e Melo created his own neurosurgical group, with Leão Ramos, Alfredo Calheiros and Serafim Paranhos, Corino de Andrade ceased his surgical activity.

In 1962, Corino de Andrade founded the Respiratory Resuscitation Centre at Hospital de Santo António and, in 1967, he created the first Cranioencephalic Traumatology Unit in Portugal. In 1972, he took over the management of the Paramyloidosis Study Centre at the Ricardo Jorge Institute and, in 1975, he joined the Instituto de Ciências Biomédicas Abel Salazar (ICBAS) Installation Committee. When he retired in 1976, the group of doctors he left in his department included João Resende, Castro Lopes, Bastos Lima, Paulo Mendo, Almeida Pinto, Rosalvo de Almeida, Sampaio e Melo, Serafim Paranhos, Januário Veloso, Luís de Carvalho, Leão Ramos, Paula Coutinho, Pereira Monteiro, Viana Pinheiro, Alfredo Calheiros, Manuel Strecht Monteiro, Pinho e Costa, Lopes Lima, Pinto de Almeida, Rocha e Melo, António Guimarães, and Cândida Maia.

In 1976, he travelled with Paula Coutinho to the Azores Islands to investigate a degenerative disease of the central nervous system known as Machado-Joseph disease. The University of Porto awarded him the title of Full Professor. He received numerous distinctions, honours and honorary doctorates. Corino de Andrade passed away on June 16th, 2005.



Fig. 4 – Corino de Andrade (reproduced from Pinto, 2009).

CELSO CRUZ

Celso Renato Paiva Rodrigues da Cruz was born in Porto on September 4th, 1936, and enrolled in the Faculty of Medicine of the University of Porto in 1953. As early as 1958, during his fifth year of undergraduate studies, he began attending the service run by Corino de Andrade and, under the guidance of Rocha e Melo, he began his neurosurgical training.

When the Faculty of Medicine was relocated to S. João Hospital in 1959, members of the Neurology Department at Santo António Hospital moved there, some of them working at both hospitals. Neurosurgery at São João Hospital was performed in the Operative Medicine Department and was mainly undertaken by Sousa Pereira, Rocha e Melo, and Nestor Rodrigues. The head of the Department, Sousa Pereira, was a general surgeon who performed neurosurgery with Corino de Andrade and had a particular interest in angiography, having shared arteriographic research with Egas Moniz. At the same time, neurosurgery was also undertaken by Paulo Mendo, Luís de Carvalho, and Celso Cruz at the Department of Propedeutics, led by Emídio Ribeiro. Emídio Ribeiro tried to better integrate the neurosurgical care provided, which was divided between the two services. He began by sharing neurotraumatologic support to the Hospital Emergency Department, which had previously been entirely assumed by general surgeons. Corino de Andrade then asked Rocha e Melo to return full-time to Hospital de Santo António, and the same occurred with Paulo Mendo and Luís de Carvalho.



Fig. 5 – Celso Cruz (reproduced from Francisco, 2023).

Under these new circumstances, Celso Cruz fully dedicated himself to assisting Emídio Ribeiro in constructing, stone by stone, the Neurology Service, assuming, together with Maria Luíza Guimarães and Olga Cardoso Viseu, neurological care and incorporating neurosurgery into it. On February 8th, 1963, he performed his first neurosurgical intervention and thereafter carried out a large part of the neurosurgical interventions of the service, including almost all emergency exploratory procedures. Consequently, Celso Cruz assumed leadership of the Neurosurgery team of the Neurology Service at the S. João School Hospital, under the endorsement of Emídio Ribeiro. On July 31, 1971, with the works *“Antigenic Stimulation and Cerebrospinal Fluid – Experimental Contribution”* and *“Hypophyseal Surgery – Indications and Techniques”*, he obtained his doctorate in Neurology from the Faculty of Medicine of Porto, having been approved with distinction and praise. On March 10th, 1972, he took permanent office as Director of the Neurology Department at São João Hospital, a role that, in practice, he was already performing.

In 1974, Celso Cruz was finally able to bring together the different neurological and neurosurgical areas at São João Hospital by incorporating the craniocerebral trauma unit. It was at this Department that I graduated in 1973. At that time, the Neurosciences and Neurological Diseases Department headed by Celso Cruz included himself (Neurosurgery), António Saraiva (Neurology), Pedro Barata Feyo (Cranioencephalic Traumatology), Joaquim Cruz (Neuroradiology), Maria Luíza Guimarães (Neurophysiology), Teresa Lavandeira and Maia Gonçalves (Neuropaediatrics), and Carlos Alberto Silva (Cerebrospinal Fluid Laboratory).

In addition to this progress at Hospital de São João, Celso Cruz succeeded in 1972 in establishing the Neurology Department at Hospital de S. Marcos in Braga, which was headed by one of his colleagues and former students, José Maria Brandão. Later, in 1995, in Madeira Island, the Neurosurgery Department was launched with António Reis and Gil Ferreira, and the Neuroradiology Department with José Franco, all of whom had been trained in the Neurology and Neurosurgery Department at São João Teaching Hospital. In 1998, after 36 years of dedication to S. João, following in the footsteps of his companion Dr. Pedro Barata Feyo, Celso Cruz left the university hospital service he had created, entrusting it to his friend Professor António Saraiva, whose successors would be Carolina Garrett in Neurology and Rui Vaz in Neurosurgery.



Celso Cruz was described as a Catholic man, extremely cultured, an avid and tireless reader, a lover of classical music and Spanish bullfighting, and an enthusiast of military history and mountaineering (which he practiced particularly in Gerês, a natural region he loved). He was always passionately dedicated to his work at the Faculty of Medicine of the University of Porto and Hospital de São João. He was a founding member of the League of Friends of the Military Museum of Porto. Celso Cruz passed away on October 6th, 2004, at the age of 68.

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