

Study of the Investigative Work of the Neuropathologist Jordi Cervós Navarro through some of his Conferences, Speeches and Talks

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Abstract

The following study aims to publicise the neurological research work of Jordi Cervós Navarro through some of his conferences, speeches and talks. Cervós born in Barcelona (Spain) in 1930. When finished his degree in medicine (1952), he travelled to Austria and Germany to work as a doctor in neurology clinics. Since 1954 he has been an associate lecturer and since 1961, a lecturer in neuropathology at the Free University of Berlin (Germany). From 1968 until 1998 he was a professor of neuropathology at this same university. Cervós, when embarking on his career in Austria, devoted himself to psychiatry, but over time he edged towards neuropathology. As a neurologist, his studies focused on the Metabolic and Degenerative Diseases of the Central Nervous System, of the Cerebellum, Brain Stem, and Spinal Cord (Spinocerebellar Degenerations), disorders of Lipid, Pigment, Protein or Mineral Metabolism or blood-Spinal Cord and Brain Barriers in Health and Disease for example. Cervós has had a prolific career of research and exhibition of his works that has taken him around the world for almost 50 years.

Keywords: Brain tumours, Brain arterioles, Apoptosis, Granulomatous, Electron microscope.

Methodology

This is a theoretical reflection on the professional life of Jordi Cervós Navarro.

Full text

I'm pre-doctoral researcher at The Catholic University of Valencia Saint Vicente Martyr (UCV) Spain. The thesis title is: Study of Valencia for the practice of Physical Education and Sports of the Elderly according to the Vancouver Protocol.

My research work in active aging has led me to be interested in the biological degeneration of the human body. Surprisingly, I have discovered that neurons are key in this process. Theories of aging are one of my passions; it's for that very reason that I found it interesting to share with you a brief tour of the brilliant and valuable research career of neuropathologist Jordi Cervós Navarro through some of his conferences and speeches.

Jordi Cervós Navarro was born in Barcelona (Spain) in 1930. When he finished his degree in medicine (1952), travelled to Austria and Germany to work as a doctor in neurology clinics [1]. Since 1954 he was an associate lecturer and since 1961 a lecturer of neuropathology at the University of Bonn (Germany). From 1968 to 1998 he worked as professor of neuropathology at the Free University of Berlin. Cervós,

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Cervós has had a prolific career of research and exhibition of his works that have taken him around the world for almost 50 years. In 1946, Cervós graduated in medicine. He received a scholarship to continue his studies of psychiatry in Innsbruck. However, his interest in brain diseases eventually led him to specialise in neuropathology in Bonn (1953). In 1955, during the second Congress of Neuropathology (London), Cervós met with the best specialists in neurology at the time and with Spanish doctors who possessed the greatest international presence on neurosurgery at the time.

He defended his doctoral thesis - Encefalitis Granulomatosa Reticulohistocitaria - in Spain, obtaining the highest mark and the Leonardo Torres Quevedo prize. In 1957, the second International Congress held in Brussels, brought together all the disciplines dedicated to the nervous system: neuroanatomy, neurophysiology, neuropathology, neurosurgery, epileptology and neuropsychiatry. American scientists presented the most interesting results with new techniques obtained by electron microscopy. Electron microscopy allowed a qualitative and quantitative leap in all specialties related to cell morphology. Its importance for the future was recognised worldwide. "The electronic microscope was a work tool throughout my professional life and the key that opened doors in my academic career". [2].

In 1958 Vienna, during the seventh meeting of the German Society of Neuropathology, he presented his first studies with the electronic microscope. In 1960, he finished his work on the alterations in the nerve cells that were produced when sectioning the nerve, observed with the electronic microscope 1962. Taking advantage of a beta Tron (electron accelerator) that was in the institute of radiology at the Cervos University I was working on a project about the alterations caused by irradiation of the brain by beta rays. "In the cytoplasm of the nerve cells I have found alterations difficult to interpret, although 20 years later it would have been possible to know them as a manifestation of apoptosis (programmed death of damaged cells)" [3].

In 1964, with the increase in neurosurgical activity and the frequency of traumatic brain injuries in traffic accidents, cerebral edema became, and is still, a focal point of study in the neurological sciences. "It is the cause of complications that often determine the death of the patient." [2]. Cervós presented at the International Congress of Neuropathy in Zürich the report named "Cerebral edema".

In 1968, he was appointed professor of the Free University of Berlin and director of the Institute of Neuropathology, positions he held for 30 years. He was also Vice Chancellor

and Dean of the Faculty of Medicine (1974-1982), a member of the Board of the German International Society of Neuropathology and President of the German Society of Neuropathology and Neuroanatomy. In 1973, at the meeting of the American Association of Neurological Surgeons, he presented his work on "Discovering the existence of an innervation of brain arterioles." In 1974, he presented his work on ultra-structures of brain tumours at the University of Berkeley and Stanford (San Francisco).

In 1977, the diagnosis of tumours, muscle, skin and conjunctiva biopsies were doubled. In addition to having significantly increased autopsies from neonatology, as his colleagues Schneider and Stoltenburg studied brain injuries in children who had suffered perinatal hypoxia (lack of oxygen in the blood). In this year in Stockholm, there was a symposium on neurogenic control in the brain circulation. Its contribution to the knowledge of the innervation of brain arterioles was made internationally known. During this symposium he asked to study the histological sections of Lenin's brain under the microscope. He could confirm that the only pathological finding was a small heart attack, which is attributed to the attack he suffered in August 1918.

In 1980, the volume on "Vascular Diseases of the Nervous System" was published within the Handbuch Spezielle Pathologische Anatomie. Ed. Springer. In 1991, he prepared another volume within the same series was released, this time dedicated to the metabolic and degenerative diseases of the nervous system. Ed. Academic Press. In this year, his studies on brain death and the determination of the "moment of death" were presented in the department of Gerontopsychiatry of our university. "Nobody can determine the moment of death" [2].

Brain death. For thousands of years this had not been a problem, for the stopping of the heart and breathing was a sure sign that the person had died. But all this changed when heart transplants were achieved and apparatus for maintaining artificially breathing were instituted. The contribution of neuropathology to the resolution of the problem consisted in defining criteria of brain death as individual death. "Brain death became the subject of one of the conferences that I had to teach more frequently for many years. Even for an audience not directly related to medicine" [3].

In 1982, he received an invitation from the Japanese Society for The Promotion of Science for a 3-month research stay in Japan. In 1997, Cervós returned to Spain. In recognition of his scientific merits he became Chancellor of the International University of Catalonia (UIC) from 1997-2001. Later he would be appointed Chancellor Emeritus and Director of International Relations and Honorary Doctor for 5 other universities: Complutense de Madrid, Zaragoza, Tokushima, Sransk and Hannover [4,5].

Nowadays, at eighty-seven, Cervós remains active in the background, dedicated more to medical journalism and scientific dissemination, which has led him to publish numerous articles.

Discussion and Conclusion

As a neurologist, his studies focused on the Metabolic and Degenerative Diseases of the Central Nervous System, of the Cerebellum, Brain Stem, and Spinal Cord (Spinocerebellar Degenerations), disorders of Lipid, Pigment, Protein or Mineral Metabolism or blood-Spinal Cord and Brain Barriers in Health and Disease for example. Cervós has had a prolific career of research and exhibition of his works that has taken him around the world for almost 50 years.

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