

Raupp

50 years of neuroradiology

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ABSTRACT

Objective: Evaluate the laboral and intellectual contributions of a founder of Brazilian Neuroradiology to the development of specialty. **Method:** Interviews were conducted with Dr. Raupp and contemporary doctors. Then we made a literature review with the Raupp search term aiming to identify those papers which included major changes in the diagnostic and therapeutic neurosurgical. **Results:** The colleagues consulted were unanimous in recognizing the work of avant-garde and the importance of Dr. Raupp to the development of neuroradiological methods, especially in the pre-computed tomography fase. **Conclusion:** The work of Dr. Raupp was fundamental for the consolidation of Brazilian Neuroradiological School over the past five decades. He developed diagnostic and therapeutic techniques in congruence with the practices of the specialty on the global stage and he promoted education through medical residency programs.

Key words: neuroradiology, interventional radiology, Raupp, medical residency programm.

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RESUMO

Objetivo: Avaliar a contribuição laboral e intelectual de um dos fundadores da Neuroradiologia Brasileira para o desenvolvimento da especialidade. **Método:** Foram realizadas entrevistas com o Dr. Raupp e com médicos contemporâneos. Em seguida, foi feita uma revisão de literatura com o termo Raupp com o objetivo de identificar os trabalhos que definiram mudanças importantes na avaliação diagnóstica e terapêutica neurocirúrgica. **Resultados:** Os colegas consultados foram unânimes no reconhecimento do trabalho de vanguarda e da importância do Dr. Raupp no desenvolvimento das técnicas neuroradiológicas, especialmente na fase pré-tomografia computadorizada. **Conclusão:** O trabalho do Dr. Raupp foi fundamental para a consolidação da Escola Neuroradiológica Brasileira ao longo das últimas cinco décadas. Ele desenvolveu técnicas diagnóstica e terapêutica em congruência com as práticas da especialidade no cenário mundial e promoveu o ensino através dos programas de residência médica.

Palavras-chave: neuroradiologia, radiologia intervencionista, Raupp, programa de residência médica.

Son of Daniel Velho Raupp and Adahir Leinhardt Raupp, Sérgio Fernando Raupp was born on August 29 in 1936 at Rio Pardo and he graduated at Medicine School from Universidade Federal do Rio Grande do Sul on Dezember 16 in 1960 (Fig 1). In the same month Raupp defended the thesis *Radiculografia com contraste hidro-solúvel*, he was building clinical experience with

a unpublished theme in the Americas^{1,2} becoming the second Brazilian physician to devote himself to Neuroradiology, second only to the Dr. José Záclis, Neuroradiologist at the Hospital das Clínicas of Faculty of Medicine at the Universidade de São Paulo since 1947^{3,4}.

Academic and scientific career

Intellectual wit of the Dr. Sérgio evi-

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Fig 1. Graduation in Medicine, UFRGS 1960.

dent in the excerpt from his thesis “if we respect the science authority of teachers, at any time we refrain from thinking, and we were looking at the scientific truth from evolutive and plastic eminently angle, never static or dogmatic way”¹, found an environment conducive to the development of a new specialty given the volume of medical consults and prestige enjoyed by the service Dr. Eliseu Paglioli, at Pavilhão São José. By self-taught also used the pneumo-rachis, pneumo-mielography or gas mielography, liposoluble contrasted positive mielography, the discography or nucleography, the vertebral flebography, the subclavian angiography, the aortography, the retrograde catheterization, among other types of puncture for injection of contrast for diagnostic purposes⁵⁻⁹.

His original studies in South America on expansive processes in the posterior fossa provides diagnostic and topographic precisions impressive¹⁰. Intraoperative angiography was another innovation that Dr. Raupp introduced in our country³, helped lead to the cure several patients in a single neurosurgical approach⁷. In the case of arteriovenous malformations, has already watched the poor prognosis in those who had deep venous drainage and intraparenchymal hematoma^{7,8}. The rigor of his practice and observation allowed the identification of benefits in different ways of catheterization¹¹, and criticism about the complications of direct puncture of the vertebral arteries abandoning this technique in mid-1970¹². In 1975, he reveals the zonoangiografia¹³ showing with a new technique the vascular structures of the brain stem and cerebellum defining a method that complements the investigation of posterior fossa. The work on vertebrobasilar angiography and zonoangiography were original and independent contributions of Dr. Raupp to the Neuroradiology¹⁴.

In addition, he devoted himself to the study of venous circulation in the brain works whose descriptions



Fig 2. Celebration of the 4th decade of service.

were not limited to anatomical details but described the situations in which individual characteristics defined the most frequent variations in the development of some venous branches, as the interdependence between histological development of the superficial sylvian, Trolard and Labbé veins, or the presence of the uncinate or uncal vein, originates in the anterior perforated substance, projecting antero-inferiorly, reaching the cavernous sinus¹⁵. Accordingly, so prolific was that his anatomics preparations were widely used in anatomy classes and conferences and served as the basis for the thesis defense of *Livre-Docência*¹⁶.

The creation of the Center of Diagnostic and Therapeutic Neuroradiology (Fig 2) expanded the usefulness of the techniques that served not only to Neurosurgery but also other specialties from the Santa Casa Complex¹⁷⁻²⁰.

The Neuroradiology has evolved, however, with a range of endovascular therapies that use alcoholic solutions, chemotherapeutic agents, detachable microcoils and/or Onyx, among other materials for embolization of dural fistulas, arteriovenous fistulas, arteriovenous malformations, aneurysms, tumors of central nervous system or metastases.

The peers' recognition

“My friendship with Sérgio Raupp started already in school, in Colégio Rosário, in Porto Alegre, which we were both students. Today I remember the boy happy, bubbly, wisecracking. Later we were colleagues in the Faculty of Medicine of UFRGS, in Porto Alegre, and again he showed the same energy, the same intellectual qualities now associated with a tremendous dedication by study and practice of medicine. Later our paths parted, because I went to Public Health, but remained Sérgio gives me admiration for their truly pioneering work in the field of Neuroradiology. His name is forever

inscribed in the history of Gaucha and Brazilian medicine.” Moacyr Scliar, Public Health Physician and Writer, member of the Academia Brasileira de Letras, in correspondence to the author.

“I still a 5th year medical student, ahead to the control desk, when I had got his first lesson in Neuroradiology. Constitutes the first person to give me a solid foundation of conduct, criteria of rational analysis, and take me to the scientific reasoning, show where you might make a mistake, preventing the error, and if you are wrong how can you try to correct the error.” Dr. Enedir Borges Teixeira, first physician of the RS to work as a neurosurgeon outside the state capital, in correspondence to the author.

Final considerations

Dr. Raupp reaches 50 years of experience with several titles: Citizen Emeritus of Rio Pardo, Specialist in Neurosurgery, in Neurology, in Computer Tomography, in Neuroradiology, Member of Academia Brasileira de Neurologia, Member of Colégio Brasileiro de Radiologia, Member of Academia Brasileira de Neurocirurgia - management headed by José Ribe Portugal.

The work of Dr. Sérgio Raupp extinguished the words “exploratory craniectomy” and have defined a school of topographic diagnosis precision since pre-CT and MRI fases. It is because until the development of neuroradiological methods, the physical examination was the only option to the topographic diagnosis of the disease in the pre-operative stage.

Today, however, Dr. Raupp is the head of Neuroradiology at Santa Casa de Porto Alegre, is professor at the Faculty of Medicine of PUCRS and working in his clinic, SERPAL, where he coordinates the neuroradiological discussions with resident doctors and heads of neurosurgical services.

The rauppian’s work was the vanguard in neuroradiological diagnosis in our country. He is the older Neuro-radiologist in Brazil. Dr. Raupp obtained the respect and recognition from their peers for ethical practices and scientific thinking over half a century.

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