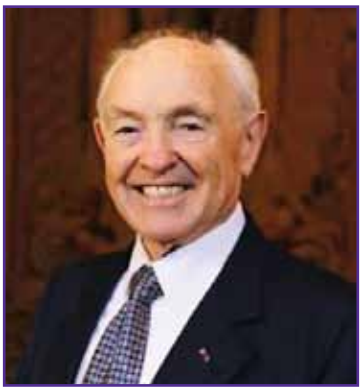
Yves Cotrel

(1925-2019)



YVES PAUL CHARLES COTREL was born on April 25, 1925, in Dinan, Côtes-d'Armor (France). He was destined to be a creator, an innovator, a revolutionary and an illustrious mind of the twentieth century in the field of Surgical Management of Spinal Deformities.

After studying in his hometown, he was admitted to the School of Medicine in Paris, where he completed his training and PhD. He wanted to become an Obstetric Surgeon and settle in his native Brittany, but, covering for an intern at the Maternité de l'Hôpital de Neuilly-sur-Seine, agreed –to help a friend– to do a temporary internship at the Institut Calot in Berck Plage (Berck-Sur-Mer, Côte d'Opale). He arrived at Berck on October 6, 1948 –stumbled upon scoliosis–, as he liked to say, and remained there until his retirement (almost 30 years later). He wrote, together with Georges Morel, Gaston Héripret and Jean Duriez, one of the most glorious chapters in the history of the Institut, and worked to put the French School of Orthopedic Surgery at the world's forefront during the 20th century.

He began his career at the Institut Calot, in charge of the orthopedic management of Pott's disease patients, who were many. However, with the advent of antibiotics, the incidence of all kinds of spinal deformities at said hospital and the appointment of Professor Jean Cauchoix as Chief Surgeon, Cotrel quickly turned his focus to the management and research of deformities. In 1953, he assisted Cauchoix on the first joint fusion for scoliosis at Calot. In 1958, Cotrel received a training scholarship to visit the most prominent Orthopedic Departments where scoliosis was treated in the United States: he met and worked with John Cobb, Joseph Risser, John Moe, Ignacio Ponseti, and Walter Blount, among many others. He was astonished, however, by the lack of attention paid by his colleagues to Abbott's approach for the orthopedic correction of spine alignment, of which François Calot had been the leader in Europe. As an anecdote, during his visit to Ignacio Ponseti in Iowa, his boss –the great Arthur Steindler– had one of Argentina's greatest doctors, Rodolfo Cosentino, as fellow, for whom Steindler wrote a summary and an opinion of what was discussed with Cotrel. This was perhaps a glimpse into the future interest and relationship of the Argentinean School of Orthopedics with the French School of Spinal Surgery.

Upon his return from the USA, in 1959, Cotrel conceived and created, together with a friend, the Society for the Manufacture of Orthopedic Materials (SOFAMOR), which was originally located at the workshop of an old wheelchair service house, which produced and manufactured all of Cotrel's designs during the time. The Society would become popular in the 80s and 90s, when it changed its name to SOFAMOR-Danek. During his stay in the USA, Cotrel also forged bonds with the North American School and established the foundation of a series of creations that he produced during the following 15 years: the EDF plasters (and their corresponding table), which have recently been revalued by the North American School as a useful treatment for early-onset scoliosis; the active preoperative continuous traction; the spinal surgery table for perioperative correction; the tension band plating of the tibia with autologous grafting –the tension band being fixed with hooks at the ends–, and its dynamometric outrigger for scoliosis correction (precursor of the Harrington method); and the famous device for transverse traction (DTT) that was used in combination with the Harrington rod. In addition, the bonds he forged led him, for instance, in 1967, to be the only foreign guest at the Second Meeting of the SRS, created the previous year, and to the foundation, in 1968, of the Study Group on Scoliosis (GES) together with other friends (Pierre Stagnara, Pierre Queneau, Christian Salanova, Claude-Régis Michel).

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In 1975, at the age of 50, when he seemed to be at the best scientific and professional moment of his life, he suffered three cardiac arrests due to a severe arrhythmia and had to take a premature retirement, in 1977, "for permanent disability". But when everything seemed over due to his health problems, Cotrel gave an enormous life lesson and, far from surrendering, between 1978 and 1983, he focused on researching a new philosophy and a new device for the correction of spinal deformities that would allow better results and avoid all types of postoperative compression garments.

Working with Professor Jean Dubousset of Hôpital St. Vincent de Paul (Paris), they created the "**CD Instrumentation**" (Cotrel-Dubousset) and the "**3D corrective mechanism**" —quickly adopted worldwide—, a true "revolution" in the conception of spinal deformities, a "Copernican turn" that led to a drastic change in the concepts upheld until that moment. Hundreds of spinal surgeons of different parts of the world attended the Institut Calot during the so-called "CD Weeks", in which Argentinean "foreign residents" had an active participation, and even more participated in the annual meetings of the GICD (Groupe Intenational Cotrel Dubousset). All of us who attended said meetings were witnesses not only of Cotrel's willingness to share his knowledge, but also of his kindness and generosity: the first box of the CD Instrumentation that arrived in the country was a gift he made to one of the Argentineans that were there so he could train surgeons in the approach. He was very fond of us: he always remembered with affection to have sung "La Marseillaise" in Rosario during a meeting together with the assistants (Argentineans). Another gift was the "CD Scholapship" that allowed many foreign surgeons to be trained in his approach and principles. In the years following the introduction of CD Instrumentation, Cotrel undertook a sort of crusade of international training; according to a colleague and friend: "those years were the Age of Enlightenment for spinal surgery".

During the years in which Cotrel worked, perhaps even harder, traveling around the world spreading new ideas and new instrumentations, he operated in many countries and received numerous distinctions, such as that of Honorary Member of the SRS, as well as of 10 other national associations; Commander of the Legion of Honor of France; and Commander of the Order of the Oak Crown of the Grand Duchy of Luxembourg. He was a true globetrotter in pursuit of education and professional exchange.

However, despite all of his activities, Yves Cotrel always had time for his family, i.e. his wife Marie-Lou and their 8 children. In fact, some of his children—especially his eldest daughter, Marie Hélène Plais Cotrel, and Philippe Cotrel (who was once Chairman of the SOFAMOR)—joined him in his effort to spread the new philosophy. The commitment of the Cotrel family towards researching spinal diseases was such that, in 1999, they decided to create the **Cotrel Foundation**, with the support of the Institut de France, dedicated to *"coordinate, support and promote the national and international research in the field of health and, in particular, of spinal disorders"*. His idea was to continue his mission "at the service of patients", no longer working on their management, but researching disease etiologies.

In one of his last conferences, Yves Cotrel confessed that, if he learned something, it was that, in our profession, *"we have to let the windows and doors of our house wide open. Open the windows to see what is done elsewhere; it promotes thinking and self-criticism. Our mistakes are not useless if they serve others... Open the doors to go out and see the place, observe, discuss, compare, and also welcome all those who 'come to see'"*. The great lesson he had learned throughout his life's journey is that ***a mission must not be abandoned; it should be welcome and taken on with modesty***. Yves Cotrel accomplished the mission he undertook with flying colors, and, for that, he will long be remembered. **RIP.**

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