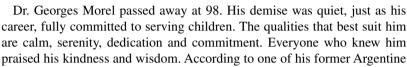
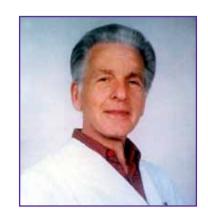
Georges Morel, MD

(1921-2019)





interns, "he was an admirable man and a great human being: he not only had gifted hands for surgery, but also gifted personal qualities."

Georges Morel was born on February 17th, 1921, in Lille, France; an older brother of 6, his childhood and adolescence were marked by the financial hardships of his father (who had been a soldier in the "Great War" [1914-1918) and by the early manifestation of his vocation: at 7 years old, Georges decided he wanted to be a doctor. Despite some difficulties, he had a happy childhood and a family in which appreciation and affection were strong among the siblings. This bond continued until his demise with his two sisters who are still alive.

After graduating from high school and passing the Certification Exam on Physical, Chemical and Biological Studies (a pre-requisite for attending medical school), he began his studies in the field of Medicine at the Catholic University of Lille. Although he had to live through the bleak years of World War II, he was fortunate enough to work as a Gross Anatomy dissector and to become an intern in different hospitals—an opportunity to be close to the ill or "at the bedside of the ill", as he liked to say. During his time as assistant professor and dissector, he acquired a great knowledge of Anatomy that he would take advantage of years later to better manage a dislocated hip or a clubfoot. He was not able to complete his surgical training because of the war, but, during his internship, he got to live, for the first time, at the Institut Calot of Berck, where he had one of his best professional experiences and formed strong bonds with the people there. He also met his girlfriend—Jaqueline Deram—around the same time and married her in August 1948.

After the war, he got a position as a surgical resident in the town of Oignies (in the Nord-Pas-de-Calais Region) where he worked tirelessly to preserve the health of the local miners.

He then left for Cameroon (Africa) to work at the Efok Hospital as a surgeon for a Catholic charity (Ad Lucem), but due to his wife being sick with a very severe case of malaria, he returned to France with her and their little daughter after 7 months. He settled down in Berck in October 1950 after taking a job offer from the Institut Calot. Berck-sur-Mer, a small town in the French department of Pas-de-Calais (North Sea), was, as of the second half of the nineteenth century, a place where many hospitals specialized in osteoarticular disorders began to emerge, and the Institut Calot (initially called the Institut d'Orthopédie) was one of the most prominent ones. There, Georges met Yves Cotrel, and the duo was later joined by Jean Duriez—who would become Head of Rheumatology and Basic Research—and Gaston Héripret—the Radiologist who was so famous at "the Calot". Together, they became "the new 4 of Berck", as they are affectionately known in the French scientific and medical community, in contrast with Victor Ménard, François Calot, Jacques Calvé and Etienne Sorrel, who had been the pioneers of scientific and medical progress in Berck during the early twentieth century. This new team of 4 "top specialists"—of which Georges Morel was a key member—was wisely led by Professor Jean Cauchoix, whose scientific work led to innumerable and valuable studies as of 1955 (Figure 1). Morel and Cauchoix established a strong bond at Calot that lasted a lifetime.

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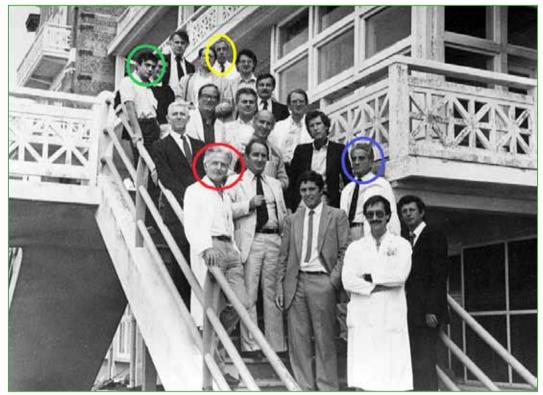


Figura 1. A group of physicians of the Institut Calot: Dr. Morel (red circle), Dr. Héripret (yellow circle), Professor Cauchoix (blue circle) and Dr. Christian Morin—successor to Dr. Morel (green circle).

As calm and self-controlled as he was in his actions, Morel was, at the same time, restless, curious, self-critical, committed and dedicated to scientific work. Aware of limitations during his initial training in Pediatric Orthopedics, he took numerous courses and internships at the Black Notley Hospital (in Essex County, England)—under the wing of Dr. Wilkinson—and at the Royal National Orthopedic Hospital in London, England. He was also a regular visitor at the Orthopedics Department led by Professor Merle d'Aubigné at the Hôpital Cochin in Paris.

During his internship at the Institut Calot until February 1986, when he retired, Morel devoted himself, as stated by Professor Cauchoix, "with complete modesty but with unparalleled commitment to the well-being of children with malformations and disabilities". This earned him great recognition in the field of Pediatric Orthopedics in France. Such was his devotion that on the day of his 65th birthday (February 17th, 1986), just before retiring, he performed his last pelvic osteotomy.

He passionately loved his job and the children he cared for: both in the office and in the hospital, children and their parents were at the top of his priorities, and he made them feel that they were the most important people in the room, whatever their social status, race or religion.

He was a remarkable physician and a composed surgeon in whose hands "all seemed easy and safe." Watching him operate was a pleasure: seamless hemostasis and dissection planes, absence of abrupt gestures, caution during correction maneuvers, and compliance with the "no touch" rule (not a single drop of blood was ever to touch his gloves).

Georges Morel was not a university professor; however, he was indeed a TEACHER and a role model for his disciples and the students who learned to love Pediatric Orthopedics at his side. He particularly enjoyed teaching his interns, gathered around an X-ray viewing box late at night, after a very long day in the operating room. Every year, the Institut Calot welcomed fellows from all around the world, but mainly from four places: Cauchoix's Department at the Beaujon Hospital (Paris), Lebanon, Mexico and ARGENTINA. Indeed, an "Argentine Legion" of orthopedic surgeons was lucky enough to benefit from Morel's teachings (Figure 2). He was a role model for



Figure 2. A group of the "Argentine Legion" of orthopedic surgeons who trained at Calot, in postgraduate programs, under the supervision of Professor Jean Cauchoix and Dr. Georges Morel. Photo taken in 2000, during the 100th anniversary of the Institut Calot.

several generations. One or two nights a week, the interns were invited to the "Chief's" office, where medical records were neatly kept and follow-up images were displayed: a pelvic X-ray of an absolutely normal adult next to an old X-ray of a 2-year-old boy with high hip dislocation, or a normal spinal X-ray of a 20-year-old man who, at age 3, presented with "early onset scoliosis"—as it's now called—that was already 50° and that seemed doomed to a joint fusion.

His favorite subjects were many: hip dislocation after the age of walking (in which he achieved unmatched long-term outcomes), clubfoot in older children, orthopedic management of infantile scoliosis (together with Cotrel, he carried out research on corrective casts, and, together with Min Metha, on the possibility of reversing scoliosis of a more "benign natural history"), and management of lower limb asymmetries and of osteogenesis imperfecta (he invented a pneumatic orthosis that, for many years, helped manage these fragile children). 1-5

He persistently reviewed the medical records of his former patients to try to understand what went wrong and find a solution. It was this meticulous review of the medical records that led him to firmly believe that the traditional approach—indisputable at the time (the 60s)—to treating late-diagnosed (after the age of walking) developmental dysplasia of the hip by orthopedic reduction followed by femoral osteotomy for re-direction and re-shaping did not bear successful outcomes at the end of growth. The accidental discovery of a new surgical approach during a conference, described by a Canadian surgeon called Robert Salter, who was a speaker at the conference, was a revelation for Morel: it was this pelvic osteotomy—and not the sacrosanct femoral osteotomy—that was required after dislocation reduction for stabilization and treatment of dysplasia. Making the French orthopedic community accept this new way of seeing things was not easy: he needed a lot of courage (even "recklessness" according to one of his contemporaries) for presenting, in November 1970, his experience with his first 100 cases at the annual Congress of the SOFCOT (French Society for Orthopedic and Trauma Surgery).⁶ The moderator of his presentation was Pierre Petit, an undisputed mastermind of French Pediatric Orthopedics at the time. It took many more years for his ideas to be accepted and appreciated in full.⁷⁻⁹ The story goes that one day, in a conference in Mexico in which Morel was a guest speaker, Salter—the Canadian physician—said that Morel's outcomes and proficiency in his technique were even better than his own.

Another major contribution of Georges Morel was in the orthopedic management of idiopathic infantile scoliosis ("early-onset scoliosis"): in 1974, during the annual meeting of the SSG (Scoliosis Study Group), he presented 10 cases of progressive infantile scoliosis in which orthopedic management had proved to be exceptionally effective. This challenged and shocked the "world of scoliosis" so much that the experience of *Morel from Berck-Plage* would even be mentioned in the prestigious work of John Moe and Robert Winter (*Scoliosis and Other Spinal Deformities*). This didn't go unnoticed in Great Britain either. Dr. Min Mehta—an emeritus scoliosis specialist—payed him a visit at the Institut Calot to study his cases and his technique with the aim of improving her orthopedic management approach. The resulting method is still the backbone for the management of early onset scoliosis. 14,15

But while professional and scientific duties consumed most of his time, Georges Morel was an exemplary father, always there for his children (Martine, Bruno, Laurence and Charlotte), and later for his grandchildren. And not only Sundays were family days! He was also there during the week, for brief camping trips on the weekends, for family vacations—even for vacations alone with the children (without their mother if she needed a "family break")—, and at least once a year for family adventures that would delight everyone with priceless memories.

Upon his retirement, Georges turned the page and did not look back, having been fortunate enough to have an exciting career, both from a professional and a humanitarian point of view, and having chosen the life he wanted to lead. He was also fortunate to be able to designate his successor, Dr. Christian Morin (Figure 3). However, he didn't retire from life itself. Instead, he took a different path, one he shared with artists (painters and cartoonists) whom he systematically visited for years in the Latin neighborhood of Paris, and one he shared with his family—which was now bigger with grandchildren and great-grandchildren.

In short, Georges Morel passed away this year, on June 20th, after living a full and successful life. However, he will remain alive in the hearts and minds of his children, grandchildren, great-grandchildren, and his countless disciples throughout the world who leveraged his teachings to improve the quality of life of pediatric patients. RIP



Figure 3. Dr. Georges Morel next to his successor, Dr. Christian Morin; Dr. Henry-François Parent (former president of the French Society of Spinal Surgery [FSSS]), and one of the authors. Photo taken in 1989.

REFERENCES

- 1. Morel G. The treatment of congenital dislocation and subluxation of the hip in the older child. *Acta Orthop Scand* 1975;46:364-99. PMID: 1146522
- 2. Morel G. La correction chirurgicale du pied bot du grand enfant. En: Carlioz H, Pous JG. *Cahiers d'enseignement de la SOFCOT No 3 Le pied bot varus équin.* Paris: Expansion Scientifique Française; 1976:91-103.
- 3. Cotrel Y, Morel G. La technique de l'E.D.F dans la correction des scolioses. Rev Chir Orthop 1964;50:59-75.
- 4. Morel G, Morin C. Technique simplifiée de l'allongement extemporané du fémur chez l'enfant. *Chir Pediatr* 1986;27(2):91-3. PMID: 3742699
- 5. Morel G. Un nouveau type d'appareillage orthopédique: L'appareillage à attelles pneumatiques. *Rev Chir Orthop Reparatrice Appar Mot* 1971;57(5):409-14. PMID: 4257960
- Morel G. L'ostéotomie de Salter dans le traitement de la malformation luxante de la hanche après l'âge de la marche. Rev Chir Orthop Reparatrice Appar Mot 1971;57(Sup 1):175-83. PMID: 4252753
- 7. Morel G. Le traitement de la hanche luxée de l'âge de la marche à 5 ans. *Acta Orthop Belg* 1990;56(1 Pt B):237-49. PMID: 2382557
- Rampal V, Sabourin M, Erdeneshoo E, Koureas G, Seringe R, Wicart P. Closed reduction with traction for developmental dysplasia of the hip in children aged between one and five years. *J Bone Joint Surg Br* 2008;90(7):858-63. https://doi.org/10.1302/0301-620X.90B7.20041
- 9. Morin C, Bisogno J, Kulkarni S, Morel G. Treatment of late-presenting developmental dislocation of the hip by progressive orthopedic reduction and innominate osteotomy. Our results with more than 30 years of follow up. *J Child Orthop* 2011;5(4):251-60. https://doi.org/10.1007/s11832-011-0346-2
- Moe J, Winter R, Bradford D, Lonstein J. Scoliosis and other spinal deformities. Philadelphia: WB Saunders Company; 1976:93.
- 11. Dickson RA, Leatherman KD. Cotrel traction exercises, casting in the treatment of idiopathic scoliosis. *Acta Orthop Scand* 1978;49(1):46-8. https://doi.org/10.3109/17453677809005722
- 12. Dickson RA. Conservative treatment for idiopathic scoliosis. *J Bone Joint Surg Br* 1985;67(2):176-81. PMID: 3872301
- 13. Mehta MH. Growth as a corrective force in the early treatment of progressive infantile scoliosis. *J Bone Joint Surg Br* 2005;87(9):1237-47. https://doi.org/10.1302/0301-620X.87B9.16124
- 14. D'Astouz JL, Sanders JO. Casting and traction treatment methods for scoliosis. *Orthop Clin North Am* 2007;38(4):477-84. https://doi.org/10.1016/j.ocl.2007.03.006
- 15. Morin C, Kulkarni S. ED plaster-of-Paris jacket for infantile scoliosis. *Eur Spine J* 2014;23(Suppl 4):S412-18. https://doi.org/10.1007/s00586-014-3336-5

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