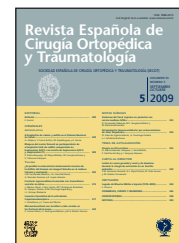


Revista Española de Cirugía Ortopédica y Traumatología

www.elsevier.es/rot



OBITUARY

Maurice Müller's legacy to Spain (1918-2009)

Legado de Maurice Müller a España (1918-2009)



Inventor of the AO technique, Maurice Müller designed more than 80 instruments for the surgical management of fractures. Inspired by John Charnley's work, Maurice developed a hip prosthesis model that has been implanted in more than one million patients throughout the world. It is believed that he carried out more than 20,000 operations during his lifetime, including 4,000 hip replacements, for which he was awarded the title *Surgeon of the 20th Century* at the Congress of the International Society of Orthopedic Surgery and Traumatology in 2002 in San Diego.

After the death of Maurice Müller last May 10th, many thousands of messages of condolence were received, but the recognition by the Spanish Society of Orthopedic and Trauma Surgery of this outstanding figure is especially significant and conveys the great loss felt given his intense teaching activity throughout Spain and the time-tested links of friendship he maintained with so many orthopedic surgeons in our country.

Maurice Müller was born and bred in Biel (Bienne), a bilingual Swiss city in the Canton of Berne. During his childhood he had already shown a marked vocation for surgery. He pursued his medical studies with exceptional brilliancy in Neuchatel and Berne, and obtained his license in Lausanne in 1944.

While still a student he underwent tridimensional skill tests that led him to choose orthopedic surgery. And his interest in the specialty became greater when he visited a World War II veteran who had a Küntscher nail in place.

He trained in surgery at the Balgrist Klinik in Zurich and did his PhD at this University in 1946. That same year he married Martha Lüthi, his lifelong companion and the inspiration for many of his scientific projects and art patronage enterprises.

His life in the Swiss Cantons allowed him to become a fluid polyglot and fostered in him a multicultural outlook that stood him in good stead when he had occasion to work in the Ethiopian hospital at Jimma, a year after attaining his PhD. He travelled to Ethiopia with his wife and offered to organize a trauma assistance network there, but Emperor Hailie Selassie insisted that trachoma was the main healthcare problem of the country. Müller therefore occupied his time with designing a program to combat this endemic disease, which apparently provided great benefits. The friendship between Müller and Hailie Selassie lasted over time.

On his return from Ethiopia he decided to perfect his skills at Liestal and Friburg and finally returned to Zurich. Worldwide traveler, he met Robert Denis in Brussels in 1950, and from that contact with a surgeon pioneer in anatomical reduction, internal fixation and union "*without a visible callus*" was born the idea of a Swiss AO, which he founded in 1958 with Martin Allgöwer, Hans Willenegger and Robert Schneider, and which produced rise to a marked change in the practice of Orthopedics: implants and instruments were developed and standards were drawn up for appropriate treatment of each type of fracture. Furthermore, he created a large center for the documentation of clinical cases

treated with the AO technique that was open to the international scientific community.

In 1960 he was designated Head of the Department of the Sant Gallen Hospital (Sant Gallen, Switzerland) where he implanted a Charnely type total hip prosthesis for the first time. In 1963 he was appointed Professor of the University of Berne and Head of the Orthopedic Surgery Service of the Insel Hospital, a post he remained in until 1980.

Rafael Orozco met Müller during an "Orthopedics Session" organized by Santos Palazzi Duarte at the Barcelona *Sagrado Corazón* Hospital (1964). Precisely, during the surgical demonstrations of another of the "Sessions" that took place 3 years later, Müller implanted a hip prosthesis for the first time in Spain. At that time, Rafael had the privilege of observing the maneuvers of the famous professor from a corner of the Berne operating theater. The conversation between them was limited to the timid greetings of the student and the laconic answers of the teacher. Rafael, who, at only 29 years of age, directed the new Red Cross Hospital of Tarragona, where most of the patients were admitted for trauma, had the opportunity of practicing AO before the first AO manual was published in 1969, the well-known manual with the yellow covers.

A few years after his first visit to Berne he returned with a suitcase full of X-rays of the first patients treated strictly following the Swiss AO technique in Tarragona. Müller received him in his brand new office at the Lindenhof Hospital. While Rafael showed him his results, case by case, in the view-box, the professor glanced over occasionally while he dictated to his secretary. When he ended the presentation, Müller said: "Let's start again," and they reviewed all the cases, one by one, down to the last detail. This was the beginning of a firm friendship that increased the amiability with which Spanish surgeons were treated when they went to Switzerland to learn the "philosophy" of this innovative surgical technique and become skilled in the management of the sophisticated instruments and implants.

At the end of 1971 the Spanish AO was formed (Orozco, Cañadell, Palazzi Duarte, González Más and Samper) and at the end of a year and a half the first scientific meeting organized by this society took place at the Central Red Cross Hospital of Madrid. All the leaders of the Italian AO and the Swiss AO attended, with Müller at the fore. At that meeting the first plans for a theoretical-practical course of AO technique in Spain were made, and this took place at the University of Navarre. This was followed by annual courses in which generations of orthopedic surgeons were trained who for years followed the outstanding figure of their Swiss teacher who also is well-known for developing a hip implant design.

Almost simultaneously with the construction of the imposing Maurice Müller Foundation in Berne (1974), that included an auditorium with a TV studio, the modest Spanish affiliate with funds for clinical documentation and the taping of audiovisual material for hip osteosynthesis and prosthesis was set up. The Spanish Foundation continued physically linked to the location of its president, Rafael Orozco, in Marbella (1975-1976), who installed and

implemented an operating theater with a great laminar flow cabinet (5x3m), state of the art technology, which at that time was only available in Spain at the La Fe Hospital in Valencia. Furthermore, teaching activity continued and there was a notable meeting of experts that included Müller and the heads of service of all the hospitals of the Swiss Cantons (Weber, Ganz, Fernández, etc.).

Subsequently, in 1977, the Foundation moved to Barcelona, where it currently continues to operate; from there links were forged with the Autonomous and Central Universities (Professors Balibrea, Navarro and Suso), multiple PhD courses were developed "Master in Osteosynthesis" and Symposiums, several books were published, amongst which was the "Osteosynthesis Atlas," based on Müller's alphanumeric classification system for fractures. The "Atlas" containing examples of many cases operated on by Spanish surgeons, has been published in 5 languages, including Chinese. The recent publication of this work in 2 volumes includes information on approach routes with splendid photographs of anatomical features in full color (Sales, Videla, Llusá, Forcada and Nardi).

Beneath his stern exterior, typical of many great thinkers, Maurice Müller was a kind, generous man of exquisite sensitivity. We shared his unbounded joy with him when he was awarded an Honorary Doctorate by the Autonomous University of Barcelona. This was the first recognition of its kind and was followed by similar distinctions awarded by 13 universities world-wide. Nor can we forget his emotional reaction, when moved to the point of shedding of tears, when he told us of the death of his old friend Merle d'Aubigne.

As to his private life, the macular lesion suffered by his wife Martha is little known. The most prestigious hospitals in the world that she visited considered that it would evolve irremediably towards total blindness. Müller took this extremely seriously, to such a point that the necessary architectural modifications were made to their Berne home, allowing for this prognosis. But on one of her trips to Barcelona she visited the Barraquer Institute. There, Alfredo Muiños, an ophthalmologist from Zaragoza, who recently passed away, carried out treatment that halted the progression of her eye condition. The couple repeatedly showed their gratitude and their recognition of the high standards attained by Spanish medicine.

Maurice and Martha have left us after concluding one of their most important acts of art patronage. They donated 33 million euros for the construction and complete fitting out of the Paul Klee Cultural Center in Berne, a surprisingly unique building designed under their inspiration. The museum, with more than 4,000 works of art, is a must for visitors to Switzerland with an interest in culture. Moreover, during our daily professional activity we will doubtless be frequently reminded of the contributions and the influence of our departed Teacher, and our thoughts will turn to him with gratitude.

L. Orozco

E-mail: lluis.oroazco@trt.es (L. Orozco)