

Hand surgery in France

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In 2013, a 339-page book celebrating half a century of activities of hand surgery from 1963 in France was published [Glicenstein and Roux, 2013]. The book notes that from 1963 to 1974, the hand surgery society in France was called Study Group in Hand surgery (Groupe d'étude de la Main, GEM). In 1974, the society changed its name to the French Society of Hand Surgery (Société Française de Chirurgie de la Main, SFCM).

Early contributors to hand surgery from France

I hope the historians among the readers will forgive me for focusing on the most influential personalities in the field of hand surgery in France, which started in the middle ages, when the most prominent personality was Guy de Chauliac (1298–1368). He elucidated the management of hand injuries based on a protocol that included skillful and systematic debridement and washing with either water or wine. Of course, in France wine is considered a medication!

During the Renaissance Ambroise Paré (1510–1590) revolutionized the management of bleeding vessels by introducing various ligature techniques. He also suggested treating flexor sheath infections through amputation of the digit with sharpened pliers. In the 18th century, Pouteau (1724–1775) accurately described wrist fractures, well before both Colles and radiography. Louis Petit (1674–1750) invented the tourniquet, and Etienne Geoffroy Saint Hilaire (1772–1844) conducted leading-edge studies in the field of teratology. The Baron Guillaume Dupuytren (1777–1835), a very prominent personality, needs no introduction. Léopold Ollier (1830–1900) wrote a 3-volume manual on bone resection and described the eponymous chondrodysplasia. Albert Blum (1844–1914) wrote the world's first manual of hand surgery in 1882.

We owe the introduction of several original surgical techniques to French clinicians. These include François Guérmonprez (1849–1932), who in 1887 performed the first pollicization using a fragment of the third digit, and Marceau Bilhaut (1848–1925), who introduced a technique of reduction of the duplicated thumb.

To complement surgery, famous authors have contributed to original descriptions of hand conditions, such as Maurice Raynaud (1834–1884) and Eugène Apert (1868–1940), who described the eponymous disease and syndrome, respectively. Muscular physiology was revolutionized by Guillaume Duchenne de Boulogne (1806–1875) thanks to the introduction of the electrical stimulator. The father of organ transplantation, Alexis Carrel (1873–1944), was awarded the Nobel Prize in medicine in 1912. He was one of the earliest pioneers of microsurgery; however, his Nazi political ideology led to his exclusion from much of French society and culture, so much so that his name was either deleted or banned from streets and roads that bore it. Similarly, René Leriche (1879–1955), well-known for his studies on complex regional pain syndrome, was not widely appreciated due to his questionable leadership of the French National Medical Council, which was founded in October 1940, and René Leriche, who denied medical licences to Jewish clinicians.

French surgeons also made great contributions to peripheral nerve surgery. A whole host of eponymous nerve tests and anatomical structures related to nerves can be attributed to French clinicians. Some of the most well-known people include Jules Tinel who described Tinel's sign associated with carpal tunnel syndrome (1879–1952), Jules Froment who described a sign of ulnar nerve damage (1878–1946), and Félix Guyon (1831–1920) who described passage of the ulnar nerve into the hand. The eminent Mehmed Kapandji (1902–1975) developed the Sauvé–Kapandji procedure, whose family name is still widely known and celebrated thanks to Adalbert Kapandji. Adalbert Kapandji was recognized as a pioneer by the International Federation of Societies for Surgery of the Hand in 2007 because of his contribution to carpal biomechanics and distal radius fixation.

French Society of Hand Surgery

Before 1963, hand surgery in France was not as structured as it is nowadays, and 1963 was a crucial year for the society, when many illustrious pioneers laid the foundations of our current practice.



Figure 1. Logo of the GEM between 1964 and 1973.

The first teaching course in hand surgery was promoted in Nanterre by Marc Iselin. This course was followed by multiple others in Montpellier. The GEM was founded by five distinguished personalities: Raoul Tubiana, Raymond Vilain, Jacques Michon, Jacques Duparc, and Pierre Rabischong (Figure 1). Only the last two are still alive. Eleven French members and eight foreign members (Johan Landsmeer, Bill Littler, Hanno Millesi, Erik Moberg, Jaime Planas, Guy Pulvertaft, Graham Stack, and Claude Verdan) took part to the first meeting. In 1974, the GEM was renamed SFCM (Figure 2). At present, the society includes 663 members of whom 66 are honorary, 31 corresponding, 183 full, 261 associated, and 112 junior members (Figure 3). The SFCM is directed by a general secretary (currently Michel Levadoux) and a committee. The president (Philippe Liverneaux in 2019), is responsible for the organization of the annual meeting, which is attended by more than 1000 hand surgeons and therapists from the French Society of Hand Therapy. The SFCM has hosted meetings of Federation of European Societies for Surgery of the Hand in Paris, first in 1996 under Alain Gilbert and again in 2016 under Christophe Mathoulin. The SFCM has its society journal '*Hand Surgery and Rehabilitation*', with all content in English. The current chief editor, Christian Fontaine, is consistently improving the content.



Figure 2. Logo of the SFCM between 1974 and 2014.



Figure 3. Logo of the SFCM since 2015.

Training of hand surgeons

In France, the specialist training of hand surgeons involves a rigorous course of 7 years. After completing specialist training in trauma and orthopaedic or plastic and reconstructive surgery, junior surgeons

have to go through sub-specialty training consisting of multiple steps: a microsurgery training course that lasts 1 year in total, a theoretical hand surgery university diploma course that lasts 2 years, and 2 years of specialist training in hand surgery in a hand surgery unit approved by the team of the *Collège des Enseignants en Chirurgie de la Main*. These 5–6 years of sub-specialty training in hand surgery eventually culminates in the award of the title hand surgeon by the National Medical Council.

In 2017, a reform was approved in France to adhere to current European standards. The duration of the training in hand surgery was reduced from 7 to 6 years by removing 1 year of training in microsurgery. This reform has caused most hand surgeons to worry about the future of our discipline and to request from the Ministry of Education and Research and from the Ministry of Health for a supplementary year of microsurgery training and for grants to establish a relevant training programme.

Hand Trauma Organization

More than two-thirds of French hand surgeons are trained specialists in trauma and orthopaedics, and the remainder are specialists in plastics and reconstructive surgery. The vast majority of them practice in private hospitals or in public university hospitals. The establishment of hand trauma units (called SOS MAIN) was created by Raymond Vilain in 1972. The Hand Trauma Unit Federation has awarded this distinction to about 60 hand trauma units in the country that provide rigorous specialist care 24 hours a day during the entire year. Each hand trauma unit counts on a minimum of three trained hand surgeons (members of the SFCM), a dedicated anaesthetist on call, and the specific equipment required for the practice of microsurgery. In 1998, SFCM published a book summarizing the national figures in terms of hand trauma care: 1.4 million hand trauma victims per year were reported. A new edition of this book is edited by Adil Trabelsi.

Unique approaches or methods

Hand surgery in France is characterized by intense creativity, as evidenced by the many presentations during the annual congress of the SFCM. Each year, new techniques are presented to an audience eager for advancements. Current French specificities

include wrist arthroscopy, wrist and hand pyrocarbon prostheses, trapezometacarpal prostheses, unicompartamental wrist prostheses in comminuted distal radius fractures of the elderly, and needle percutaneous fasciotomy in Dupuytren's disease. Other improvements include distal radius intrafocal fixation technique described by Kapandji with an external device to connect the K-wires and that now finds indications for metacarpal and phalangeal fractures, minimally invasive surgery for distal radius fractures, the use of ultrasound in hand surgery, ligamentotaxis for intra-articular proximal interphalangeal fractures, and robotic microsurgery. The 2019 SFCM congress will continue this theme of innovation in hand surgery.

Research activities

Research activities have been developing for several decades. Most university teams have direct links to laboratories of biomechanics, biomaterials, motion physiology, stem cells, nerve guides, robotics, and growth factors. Three-dimensional printing labs are being planned in some university units. A recent change in the status of academic careers is prompting surgeons to support a PhD degree, publish in journals with high impact factors, and conduct research abroad. This development is strongly contributing to improving research in hand surgery, although the financial means are not yet up to the challenge.

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Reference

Glicenstein J and Roux JL (Eds) *Half a century of hand surgery tradition in France*. Sauramps Médical, Montpellier, 2013.

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