

*The history of hernias***Henri Fruchaud (1894-1960):  
a man of bravery, an anatomist, a surgeon**R. Stoppa<sup>1</sup> and G.E. Wantz<sup>2</sup><sup>1</sup> Faculté de Médecine de l'Université Jules Verne, F-80054 Amiens, France<sup>2</sup> Cornell University Medical College, New York, USA

**Fig. 1**  
Henri Fruchaud, a corporal stretcher-bearer at the beginning of WW I (Courtesy of Henri Fruchaud Jr., his elder son)

Our profound devotion to Henri Fruchaud's memory, for his wonderful work in the anatomy and surgery of groin hernia, is shared worldwide by many surgeons. But few of them know that besides his brilliant surgical career in France and the Middle East - as an outstanding representative of french surgery - he was also a man of bravery during the two world wars.

Henri René Fruchaud was born in 1894 in Angers, the capital of the French province of Anjou, famous for its history, poets, and wines, where a place called "Fruchaud (or Fruchau) track" can be found. The fortunes of the Fruchaud family rose through their members becoming parish priests and teachers and supervisors in seminaries, who were in a position to push gifted offspring into intellectual professions such as medicine. The great-grandfather of Henri Fruchaud was most probably a peasant. His grandfather, however, was a carpenter, and his father and uncle were physicians. Henri René obtained his first degree in his birthplace and then continued studying medicine in Paris.

During World War I, Fruchaud was still an "Externe des Hôpitaux de Paris" and served for one year as a corporal stretcher bearer and then as an auxiliary doctor ("sous-aide major") in direct contact with the combatants in the Marne, Ypres, Verdun and Somme battles. His bravery was rewarded by the french "Croix de Guerre" (four citations), the "Médaille Militaire" and the Russian Medal of St. George.

In 1919, Fruchaud resumed his medical studies; the next year he passed the difficult competitive examination for the position of "Interne des Hôpitaux de Paris". After finishing his surgical training, he returned to Angers in 1924 and practiced general and tho-

racic surgery with intensity and zeal. He also visited the great surgical centers in Germany (Berlin, Hamburg, Heidelberg), Austria (Vienna), England (London), Switzerland (Basel, Davos, Lesin, Zurich), Italy (Rome) and Belgium (Brussels, Bruges) and thus was at home in many hospitals in the world.

In 1937, Fruchaud was named the first Professor of Clinical Surgery at the newly formed Angers School of Medicine. At the opening ceremony of the School on November 23, 1937, he gave the official lecture, which was titled "*In praise of the Spirit of Surgery*". The text of this strongly expressed lecture reflected his ardent devotion to surgery. By this time, Fruchaud had published more than 200 articles in a variety of fields, including anatomy, anesthesia, plastic surgery, surgery of the thyroid, neck, digestive tract, urogenital system and thorax, as well as orthopedic and cancer surgery.

Such a man could not be deflected by the Armistice of June 1940, so that he joined de Gaulle in London and was named Director of the Military Health Service of the "Forces Françaises Libres". Although by then he was middle-aged and exempt from military service, Fruchaud enlisted voluntarily and participated in the most difficult military actions and campaigns of World War II including Dakar, Douala, South Africa, Somalia, the deserts



**Fig. 2**  
Colonel Henri Fruchaud during WW II (Courtesy of Henri Fruchaud Jr, his elder son)

of Eritrea and Libya, and in Syria and Lebanon (with Lady Spears ambulance). In 1943, he landed with the first French troops in Naples as chief of the famous "Ambulance Catroux", and took part in the snowy Abruzzo campaign, the Cassino attack, and the Anzio landing.

Lady Spears, who is said to have been very authoritative and domineering, was the chief nurse and director of the Lady Spears ambulance. She was the daughter of a U.S. Industrialist, and her husband was an English brigadier in the Allied Armed Forces. In her book entitled "*Journey Down a Blind Alley*", which was written under the pen name of Mary Borden, Lady Spears described Fruchaud as "... *hot tempered... restless, quarrelsome and intolerant ... but his attitude was faultless. For he was a man of the world as well as a distinguished surgeon...; (with) an enthusiastic mind, a great love of music and an insatiable curiosity for historical things*". She also commented that during the Damas battle, "*Fruchaud was a tiger, he could and did work at lightning speed for 24 hours on end... Yet he was 52 years old and suffered asthma*". In his book entitled "*Tous n'étaient pas des Anges*" (All were not Angels, Paris, 1963) Joseph Kessel, a famous writer and a member of the Académie Française, quoted a sergeant of the French Foreign Legion: "*We had another professor with us: a doctor. His name was Fruchaud. He had neither the age nor the health required by a sol-*

*dier. But he did the whole campaign. At Queren he operated on the battle front, at 2000 meters altitude, two days' walk from our bases: He saved many men. And we needed that...*". Fruchaud's dazzling war services have been commemorated by the French "Légion d'Honneur" and the Cross of "Compagnon de la Libération".

At the end of the war, Fruchaud was tempted by further adventures. He introduced French Surgery to the Middle East. He settled in Aleppo (Syria), from where his reputation spread over the whole Arabian region. The St. Louis Hospital at Aleppo where he worked is still known as "Hôpital Fruchaud". His social life was also very active, and he is said to have organized shows and concerts by French artists at his personal expense.

In the fall of 1959, Fruchaud returned to France, where he practiced surgery in Poitiers but only for a few months. In the summer of 1960, this great surgeon, who had recently completed his book on upper abdominal surgery, was suddenly overcome by a brain hemorrhage, while at his house in Brunoy near Paris. Henri Fruchaud was buried in Tremontines, his native region. The Almighty must surely have granted peace to this brave man, who had cared for so many wounded and sick people, in the "douceur Angevine" (Angevine mellowness, celebrated by Joachim du Bellay, a French XVIth century poet, in one of his famous sonnets) of his last resting place.

Henri Fruchaud Jr. and Dr. Paul René Breger, his nephew and also a surgeon concurred that Fruchaud was a fascinating, although exacting, father, relative, and man. In the memories of his relatives and friends, Henri Fruchaud was a big-hearted man who had the strength of a giant and was an indefatigable worker. He had insatiable curiosity and enthusiasm for learning, whether technical, classical, historical, political, artistic, or musical, as revealed by his personal collection of books and records.

Henri Fruchaud's publications reflect his practical interest in diverse surgical fields:

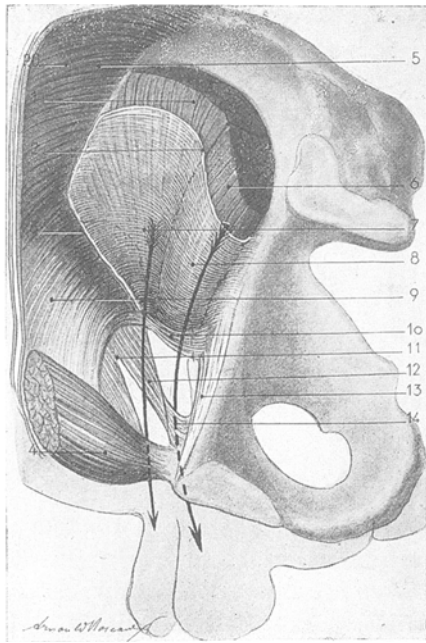
1 - *Surgical oncology* - in: "*Chirurgie et radiations dans le traitement des cancers superficiels ou peu profonds*". Imprimerie du Commerce, Angers, 1937.

2 - *Thoracic surgery* - in a book titled "*Traitement Médico-Chirurgical des Pleurésies Purulentes Tuberculeuses*" (Doin, Paris, 1939), which was written in collaboration with A. Bernou and F. d'Hour, tackling problems of the surgical treatment of pulmonary tuberculosis.

3 - *Abdominal surgery* - his last book, written in collaboration with A. Bernou, G. Lessertisseur, A.F. Lemaissier, and G. Videau, was entitled "*Chirurgie de l'étage supérieur de l'abdomen, tactiques, techniques opératoires régionales et anatomie évolutive*", (Doin, Paris, 1960) (Surgery of the upper abdomen, tactics, regional operative techniques and evolutive anatomy).

4 - *War surgery* - in "*Chirurgie de Guerre*" (Beirut: Les Heures Françaises), the fruit of his experience during World War I, was written during the campaigns in the Middle East and Italy during World War II. Fruchaud was one of the first war surgeons who favored complete surgical treatment of the wounded as near as possible to the battle front and he practiced what he preached during World War II.

5 - *Hernia surgery* - He thoroughly researched the subject of groin hernia, based on studies in a number of anatomo-



**Fig. 3**  
Fruchaud's myopectineal orifice from a postero-medial view. In "Anatomie Chirurgicale des hernies de l'aîne", Doin, Paris, 1956

my laboratories, particularly those in Angers, Paris, and Algiers. In addition to his personal findings while performing anatomic research, Fruchaud's work was based on a thorough compilation of all the anatomic publications available on this subject during the mid-twentieth century. Fruchaud's research on groin hernia surgery was reported in two books published by Doin Paris, in 1956, "*L'Anatomie chirurgicale de la région de l'aîne*" (Surgical anatomy of the groin region), and "*Le traitement chirurgical des hernies de l'aîne*" (Surgical treatment of groin hernias). These richly illustrated books include both reproductions from ancient books and famous art works and the drawings of Arnould Moreaux, the talented French medical artist who died soon after the books were published. The meticulous documentation that characterizes these books reflects both the author's ambition and his cultural and traditional background.

His book on surgical anatomy contains approximately 500 pages with 236 annotated figures and ample refer-

ences. In the first part (more than 100 pages), Fruchaud describes the classic conceptions and variations of the inguinal and femoral canals; in the second part, he discusses the origin, development, and significance of the groin area. The third part (more than 120 pages) presents his concept of the region, and the fourth part covers the physiology. The last part provides an explanation of the anatomic and biologic bases of the surgical treatment of groin hernias in adults and described the typical (parts one and two) and atypical (parts three and four) types of his personal reconstruction of the groin.

In this monumental study of the groin region, Fruchaud overturns the classical grouping of the abdominocrural area into inguinal and femoral regions, and provides a new concept of the pathway from the abdomen to the thigh. He demonstrates the presence of a peritoneal piriform fossa (mentioned by Bogros in 1823 and later appreciated by Madden in 1971). The transversalis fascia (described by Cooper), the regional part of the all-encompassing endoabdominal fascia (the first imperVIOUS barrier to intraabdominal pressure and the correct layer for an efficient hernia repair), have the shape of a funnel, described by Fruchaud as the "abdominocrural fascial funnel". It has an anterioinferior cul de sac, and the femoral canal develops through a large hole in the myofascial layers: Fruchaud's "myopectineal orifice". The iliofemoral vessels and spermatic cord pass through this orifice, and all inguinal and femoral hernias cross the abdominal wall via the same route. There is here a natural weak area, and Fruchaud wrote "*It may be said that a healthy man is, unknown to himself, a hernia bearer*".

Based on his conception of the surgical anatomy of the groin, Fruchaud asserted that the treatment of inguinal or femoral hernias should not be limited to closure of the inguinal canal or the femoral ring. Instead, a "deep reconstruction" of the abdominal wall in the entire groin region should be

performed. In his second book on hernia, Fruchaud describes this reconstruction as "the Aleppo St Louis Hospital operation". Today his suggestions may appear to be somewhat theoretical and probably overtreat groin hernias. Nonetheless, it should be remembered that Fruchaud insisted on performing a deep repair. "*In the adult, repairing inguinal hernias in the inguinal canal and femoral hernias in the femoral canal is like closing the curtain instead of shutting the window*".

Fruchaud's original work included a synoptical description of reinforcements in the transversalis fascia that facilitate the placement of sutures, the use of a ligature on the funicular vessels to allow complete freeing and lateral transposition of the cord and advice against the resection of large indirect sacs. He also provided a new morphologic classification of groin hernias and was the first to advocate that hernia surgery should be regarded as a specialized field, which was considered revolutionary at the time.

Despite his enthusiasm and inspiration, Fruchaud had difficulty in convincing his contemporary French colleagues of his beliefs, because of his aggressive originality. He referenced all the English literature and had met many of the authors of these reports, but his own works were not translated into English and have not been disseminated in English speaking countries. Fruchaud bitterly but proudly wrote, "*It is dangerous to propose new ideas*". Furthermore, his texts were published at a time when many surgeons had turned away from recognition of the importance of basic anatomy. Fortunately, today all surgeons are aware of the importance of applied research in this area. Fruchaud's work has provided the basis for modern hernia operations, including global closure of the entire myopectineal defect and the use of an anterior or posterior approach for prosthetic repairs. His work deserves a place of honor in the historical archives of hernia surgery.