

From Victor Pauchet to Gaston Labat: The Transformation of Regional Anesthesia from a Surgeon's Practice to the Physician Anesthesiologist

Annie V. Côté, MD, Claude A. Vachon, MD, Terese T. Horlocker, MD, and Douglas R. Bacon, MD, MA

Department of Anesthesiology, Mayo Clinic Foundation, Rochester, Minnesota

Louis Gaston Labat was a pioneer in the world of regional anesthesia. In the early 20th century, he brought to the United States knowledge he had acquired from his mentor, the French surgery professor Victor Pauchet. Labat was one of the founders of the "original" American Society of Regional Anesthesia (1) and the author of *Regional Anesthesia: Its Technic and Clinical Application* (2), which was considered the definitive textbook on regional anesthesia for at least 30 yr after its publication. The text was one of the first English-language anesthesia books devoted to the practice of regional anesthesia and one of the most popular in the United States at the time. Labat's book was noted to have a remarkable similarity (3) to Pauchet's book *L'Anesthésie Régionale* (4). Yet, no clear comparison of Pauchet and Labat's work, including both text and illustrations, has been done. Did Labat simply copy Pauchet's work? Was Labat's work original and simply an outgrowth of Pauchet's? Was there some middle ground, where copied elements of Pauchet are noticeable, yet a new and distinctive set of ideas, Labat's alone, emerged from the pages of *Regional Anesthesia*?

Who Was Louis Gaston Labat?

Labat was born in 1876 in the Seychelles islands on the East Coast of East Africa. After the tragic death of his father, his family moved to Mauritius where he lived most of his childhood. In 1894, he graduated with honors from the Royal College of Mauritius where he earned certificates in English, French, statics, dynamics, hydrostatics, pure mathematics, and practical chemistry. He was a brilliant student and aimed at

becoming an engineer. His plans were changed after falling in love with Marguerite Brunaud: he took a clerk job at the government in the department of legal affairs to earn enough money to marry her in 1902. Unfortunately, their marriage was troubled and, in 1907, Labat left his wife and traveled to Portuguese East Africa. He returned to Mauritius a few years later to work as an assistant pharmacist at his brother-in-law's chemist shop. During this period, Labat developed a friendship with Dr. J. Antoni Ferriere whom, after realizing the extent of Labat's talents, convinced him to pursue medical studies (3).

In 1913, Labat moved to France and in 1914 received his baccalauréat¹ in natural sciences, physics, and chemistry from the University of Montpellier. The same year, he enrolled as a student at the Faculty of Medicine of the University of Montpellier. In 1916, he moved his studies to the University of Paris where he met Dr. Victor Pauchet. Labat became Pauchet's student and assistant from 1918 to 1920 at which time Labat graduated from medical school. Victor Pauchet was a well known surgeon in France at the time with a strong interest in regional anesthesia. In 1914, Pauchet published the first edition of *L'Anesthésie Régionale*, and a revised second edition in 1917. In 1921 and 1928, the third and fourth editions were published, considerably expanded over the previous ones, and with Labat as a third author (3).

Labat and the Mayo Clinic: A Brief Overview

In the late 19th century, Drs. Charles H. and William J. Mayo joined their father William Worrall Mayo to develop the first private multispecialty group in Rochester, MN. In 1915, the Mayo Foundation for Medical Education and Research was established. The Mayo brothers were pioneers in abdominal surgery, among other noteworthy achievements, and their interest in

Accepted for publication November 18, 2002.

Address correspondence and reprint requests to Douglas R. Bacon, MD, MA, Department of Anesthesiology, Ch1-108, Mayo Clinic, 200 First St. SW, Rochester, MN 55905. Address e-mail to bacon.douglas@mayo.edu.

DOI: 10.1213/01.ANE.0000049823.67729.1D

¹ Baccalauréat is an equivalent of an undergraduate degree in the American system.

innovations in surgical and medical practice brought Charles H. Mayo to Paris in 1920. While assisting Pauchet during an operation, Dr. Mayo was impressed by Labat's anesthetic and invited him to the Mayo Clinic to teach surgeons his innovative methods of regional anesthesia (5).

In September of 1920, Labat arrived at the Mayo Clinic where he lectured physicians and surgeons on all major aspects of regional anesthesia and started work on a textbook of regional anesthesia for the American medical audience. During the course of his year at the Mayo Clinic, Labat performed well, and the staff wished to keep him in Rochester as a faculty member. Unfortunately, Labat's marital situation was made obvious with the arrival, from France, of a "lady friend," who was not his wife but who shared his life. In October of 1921, Labat left the Mayo Clinic for New York City where he established his practice at New York University and Bellevue Hospitals. He taught regional anesthesia courses at the hospital and the university until his death (3,6).

In 1922, the first edition of his book was published, and a second edition in 1928. It was considered innovative and popular. It sold well. His colleagues honored Labat's work by creating the original American Society of Regional Anesthesia where neurosurgeons, surgeons, and physician anesthesiologists met to discuss various topics and attend lectures from physicians across the United States (1). Labat died in 1934, after undergoing a cholecystectomy, from complications of chronic cholecystitis, emphysema, and heart failure (3). He left several notes and illustrations for a third edition of his book that he never published.

Labat's Book

Originally, Labat's recruitment to the Mayo Clinic was as a lecturer and demonstrator in regional anesthesia for 3 or 4 wk. When that period came to an end, Labat was invited to stay at the Clinic for the balance of the year, and write a book on regional anesthesia. Labat was promised artists, a photographer, and a stenographer. All expenses associated with the book were to be paid by the Mayo Clinic. At the close of October 1920, Labat agreed to stay on staff at the Clinic with a stipulated salary and begin work on the book. Shortly thereafter, a meeting was held between Labat, a representative of the publisher WB Saunders, and the brothers Mayo.²

The meeting delineated the responsibilities of the various parties in the development of a book based on Labat's regional anesthetic techniques. The Mayo Clinic was to put at Labat's disposal "... every facility

to do so in the way of artists, photographer, stenographer, and so forth. . ."² A junior author was also to be identified from the Mayo Clinic staff to help Labat. Work progressed over the year that he was present at the clinic. Visiting physicians asked repeatedly for the book. As the time grew close for Labat to leave the Mayo Clinic, he wrote to Dr. Charles Mayo in hopes of settling issues surrounding the book. At that time, a junior author had not been identified, nor had all of the illustrations been completed. Labat proposed to have the illustrations finished in Paris at his expense, and to have a section in the book entirely written by, and expressing the views of, the Mayo Clinic staff. Labat was willing to split the royalty with one-third remaining at the Mayo Clinic.² A draft of the Board of Governors' response exists. The board decided that the copyright and royalties should be entirely Labat's. The drawings were to be used in publication and then returned to the Mayo Clinic for possible future use.^{3,4}

Methods

Although his book was not published until 1922, it seemed that most of *Regional Anesthesia* was completed during Labat's tenure at the Mayo Clinic. How was this possible? As a co-author of Pauchet's book, Labat inscribed a copy of *L'Anesthésie Régionale* to Charles Mayo.⁵ If Labat translated Pauchet's work, edited it, and expanded it, the production time course would be reasonable. It has been noted that Labat's *Regional Anesthesia* bore a striking resemblance to the third edition of Pauchet's *L'Anesthésie Régionale* (Fig. 1). Illustrations of the left foot, for example, in Pauchet, appeared as a right foot in Labat (3). Additionally, Charles Mayo's copy of the book has at least 20 illustrations that have been altered in pencil. These illustrations then appeared in *Regional Anesthesia* in their altered form. Using his professor's book as a template made sense. Copying the ideas directly, given the state of international copyright law at the time (7), was perfectly legal!

Labat believed that the secret of his book was "the clear, concise descriptions carefully illustrated by half-nude women" (3). To compare the two books, a photocopy copy of the third edition of *L'Anesthésie Régionale* was obtained from the Wood Library Museum in

³ The original photographs of the artist's drawings still exist in the archives of the medical illustration department at the Mayo Clinic, Rochester, MN.

⁴ Draft of a "suggested letter to Dr. Labat," undated. Mayo Foundation Archives, Rochester, MN.

⁵ The book, which resides in the historical collection in the Plummer Library at the Mayo Clinic in Rochester, MN, is inscribed: "A Monsieur le Docteur C. H. Mayo avec le hommages respectueux de l'auteur G Labat Paris-Rochester—22 November 1920" [To Mister Doctor C. H. Mayo with respectful tribute from the author Paris-Rochester—22 November 1920].

² Letter from Gaston Labat to Charles Mayo, undated, but likely from August or September of 1921, Mayo Foundation Archives, Rochester, MN.

L'ANESTHÉSIE RÉGIONALE

PAR

VICTOR PAUCHET,
Professeur à l'École de Médecine d'Angers,
Chirurgien en l'Hôpital Saint-Michel de Paris.

PAUL SOURDAT,
Auxiliaire Interne des Hôpitaux de Paris,
Chirurgien des Hôpitaux d'Angers.

ET

GASTON LABAT,
Docteur en Médecine de Paris,
Jumal de la Faculté des Sciences de Montpellier.

TROISIÈME ÉDITION REFOUDUE

Avec 308 figures dans le texte.

PARIS
LIBRAIRIE OCTAVE DOIN
GASTON DOIN, ÉDITEUR
8, PLACE DE L'ODÉON, 8

1921
Tous droits réservés.
23676

Regional Anesthesia

Its Technic and Clinical Application

By

Gaston Labat, M. D.

Lecturer on Regional Anesthesia at The New York University; Laureate of the
Faculty of Sciences, University of Montpellier; Laureate of the Faculty of
Medicine, University of Paris; Formerly Special Lecturer on Regional
Anesthesia, The Mayo Foundation, University of Minnesota

With a Foreword by

William J. Mayo, M. D.

With 315

Original Illustrations

PHILADELPHIA AND LONDON

W. B. SAUNDERS COMPANY

1922

Figure 1. Frontispiece of Pauchet (left) and Labat (right).

Park Ridge, IL. A bilingual anesthesia resident (AC) translated the original French of Pauchet's book into English, including illustration legends, without having seen or read Labat's text. The accuracy of the translation was assured by a second bilingual anesthesia resident (CV), also blinded to Labat's text, who translated the first paragraph of every 10 pages in Pauchet. The translations were compared by a senior anesthesiologist (DB) and correctness of the work was established. The translation was then compared chapter by chapter, with objectively established criteria (8), to its counterpart in the first edition of Labat's book by two senior anesthesiologists (TH and DB). All authors compared the illustrations.

Comparison: The Illustrations

There were 315 illustrations found in *Regional Anesthesia* (2), 3 of which were repeated twice. Two hundred thirty-one (73.3%) of these illustrations were similar enough that they could be identified in *L'Anesthésie Régionale* (4). A comprehensive analysis of gender, details, anatomical description, needle placement, and legend of these "similar illustrations" was performed. Eighty-one (35%) of those illustrations had an identifiable gender. Of them, 73 (90.1%) were of the same

gender and 8 (9.9%) were of different gender. Two illustrations in Pauchet using a male figure were converted to a female figure in Labat. Conversely, six female figures became male in Labat (Fig. 2). There are 13 illustrations depicting naked women in Labat's book, 3 of which are not found in Pauchet's book, compared with a total of 10 in Pauchet's work. Labat's book includes 36 illustrations of naked men, 8 of which are not found in Pauchet's book, compared with 55 in Pauchet's work.

Detail completion of the illustrations was analyzed. Illustrations were described as identical, with variation if the illustrations had differences in small details such as hair, mustache, glasses, etc. (Fig. 3), and different if the illustrations were completely different but representing the same anatomical drawing. Of the 231 illustrations that we compared, 116 (50.2%) were considered similar, 108 (46.8%) had significant variations, and 7 (3.0%) were different. A close analysis of the variations in detail completion is depicted in Figure 4. Of those details, none of them, omitted or added, were found to be relevant or essential to the content or purpose of the illustration. Also, 38 (16.5%) of the images were found to be mirror images (Fig. 5).

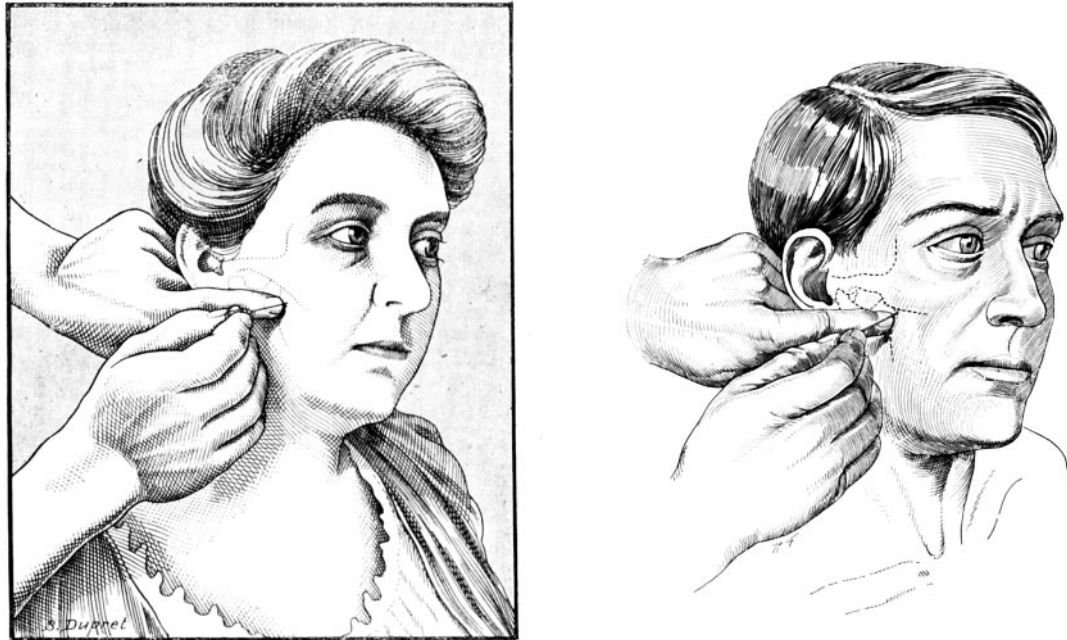


Figure 2. Figure 46 from Pauchet (left) and Figure 53 Labat (right). Note that the gender of the patient has changed and that the legend in Labat is a direct translation of Pauchet.

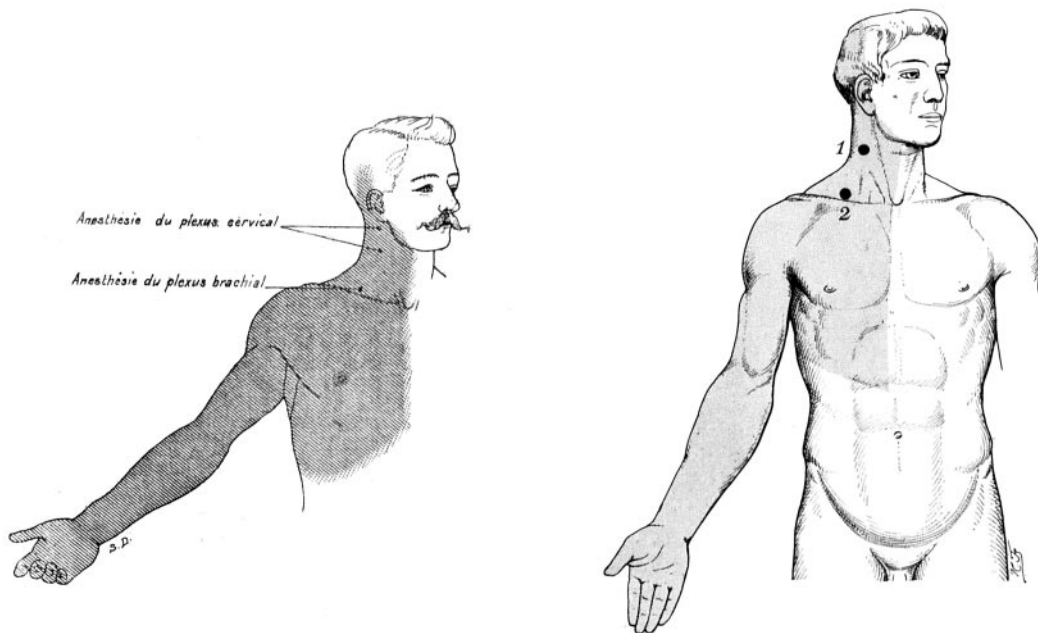


Figure 3. Figure 185 from Pauchet (left) and Figure 233 from Labat (right). Note the absence of the mustache and the completion of the torso, which do not change the block being illustrated.

Anatomical description was considered to be either similar, with variation if more than 2 additional anatomical elements were found, and different if more than 5 anatomical new components were found. We found that 108 (46.8%) were similar, 29 (12.6%) had variations (Fig. 6), and 13 (5.6%) were different. Needle placement was also carefully analyzed. It was considered similar if the needle had the exact same

location, with variation if the needle was approaching the same anatomical location but from a different approach or if an additional needle placement was added, or different if the needle had a completely different location. Only 5 (2.2%) needle placements were different, 19 (8.2%) had variation (Fig. 7), and 130 (56.3%) were similar. Legends were compared and found to be similar if they were a literal translation,

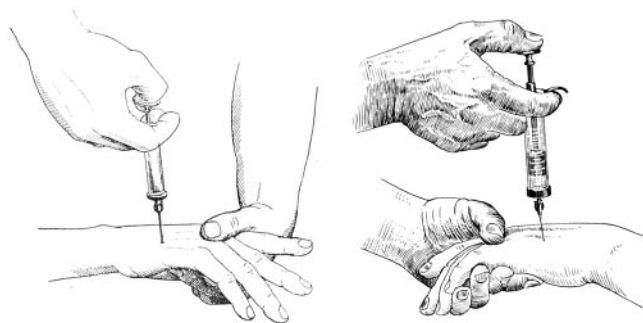


Figure 4. A close analysis of the variations in detail completion.

with variation if they had the same meaning but different formulation (Fig. 2) and different if they had completely different meaning. One hundred fifty-three legends (66.2%) were similar, 59 (25.5%) had variations, and 19 (8.2%) were different.

Eighty-two illustrations in Labat's book (26%) could not be found or compared with illustrations in Pauchet's book. These illustrations were considered "new" and were analyzed individually. Of those 82 illustrations, 16 are signed by medical illustrators that were part of the Mayo staff in 1921: R. Drake, M. Warner, T. Bergsland, and E. Fry. Thirty of these illustrations are signed by H. Frantz, who was an artist at the University of Paris and not mentioned in Pauchet. Thirty-four illustrations bear no signature. The remaining two illustrations are signed "after Georges Canuyt and Braun" who had published textbooks of surgical anatomy.

Comparison: The Text

Various aspects of the content of the two books were evaluated. Clearly, the content of the two books was very similar and the "Table of Contents" was identical. *Regional Anesthesia* (2), however, appears to be an expanded and more detailed version of *L'Anesthésie Régionale* (4). Pauchet, in the introduction to the third edition of *L'Anesthésie Régionale*, stated that "Ce livre est surtout un **Manuel de technique** [emphasis added]. Il est l'exposé des résultats de notre expérience."⁶ Thus, *L'Anesthésie Régionale* (4) was a surgeon's view of regional anesthesia. The book was clearly technical, insisting on the importance of drugs to use, equipment needed, and how to select and perform blocks. Labat's book, however, was more precise, better organized, and reflected the professionalization of anesthesia that was occurring at the time.

Patient interaction was not an important consideration for Pauchet. In fact, he precludes that patient stimulation should be minimal to insure the success of the procedure: use of blindfolds and cotton balls in the

ears was encouraged: ". . . il faut recommander le calme absolu du milieu dans lequel ils se trouvent; . . . boucher les oreilles, bander les yeux aussitôt après l'injection."⁷ Pauchet states that patients must not be questioned about the degree of sensitivity of the operative site: ". . . il est mieux de laisser le malade tranquille, d'éviter de lui parler et d'observer le plus grand silence autour de lui; l'empêcher de remuer la tête. . ."⁸ Labat's book, by contrast, was an anesthesiologist's view of regional anesthesia. The book was oriented toward patient's comfort, proper selection of a block, and better understanding of the anatomy and technique: "Gentleness is the first requisite of the anesthetist. He should handle his needle and his patient with equal dexterity. Apart from the special knowledge of anatomy which he is bound to possess, the anesthetist must be familiar with the technical details and possibilities of the proposed operation, so as to be able to anesthetize the correct operative field. Information should, however, be obtained from the surgeon as to the type and extent of the proposed operation."⁹ Labat was more humane and believed that speaking with the patient may improve block quality: "The patient should know that his co-operation is indispensable."¹⁰

Determination of the proper regional anesthetic technique for surgery was another difference between the two books. Pauchet selected blocks according to the planned surgery. He believed that block failure was relatively rare and that the solution to failed blocks was local infiltration: "Si cette anesthésie paravertébrale est insuffisante, après épreuve de la sensibilité du champ opératoire, . . . , il serait bon de préciser les nerfs qui n'auront pas été influencés par la solution anesthésique. . . ; il est impossible d'arriver à une précision suffisante, on fera le blocage du champ opératoire, en infiltrant des tranches de tissus périphériques, . . ."¹¹ According to Pauchet, blocks were "almost risk free" and should therefore be considered for most surgical interventions: "Les accidents, en anesthésie régionale, sont de minime importance. Certains dépendent du patient et de son entourage; d'autres sont imputables à l'anesthésiste peu expérimenté; quelques-uns sont provoqués par la substance analgésiante employée."¹² Labat,

⁷ Pauchet p. 321. "we must recommend absolute calm of the environment in which they are . . . plug the ears, blindfold the eyes immediately after the injection."

⁸ Pauchet p. 339. ". . . it is better to leave the patient alone, avoid speaking to him and observe silence around him, prevent him from moving his head. . ."

⁹ Labat p. 5.

¹⁰ Labat p. 11.

¹¹ Pauchet p. 298-9. "If this paravertebral anesthesia is insufficient, after evaluating sensation of the operative field, . . . it is useful to identify the nerves that were not blocked by the anesthetic solution. . . if it is impossible to reach precision, we will perform a block of the operative field by infiltration in layers of the peripheral tissues. . ."

¹² Pauchet p. 321. "Complications, in regional anesthesia, are of minimal importance. Some depend on the patient and its surroundings, others are secondary to a poorly experimented anesthetist; others are caused by the anesthetic solution used."

⁶ Pauchet p. x. This book is mainly a technical manual. It is the summary of our results and experience.

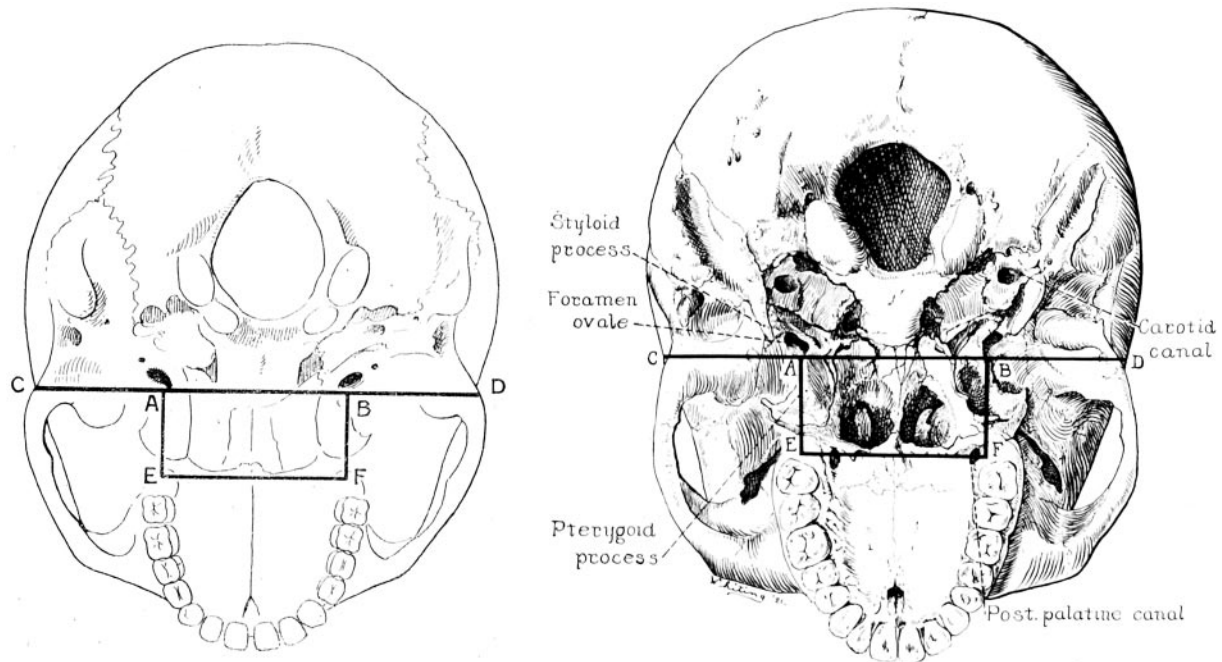


Figure 5. Figure 197 from Pauchet (left) and Figure 245 from Labat (right). Note that these are mirror images of each other.

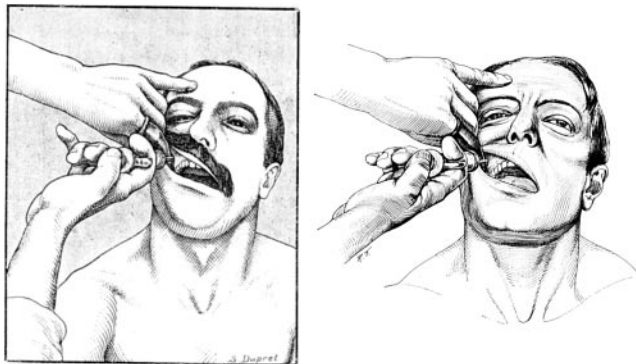


Figure 6. Figure 53 from Pauchet (left) and Figure 70 from Labat (right). Note the completion of anatomical detail.

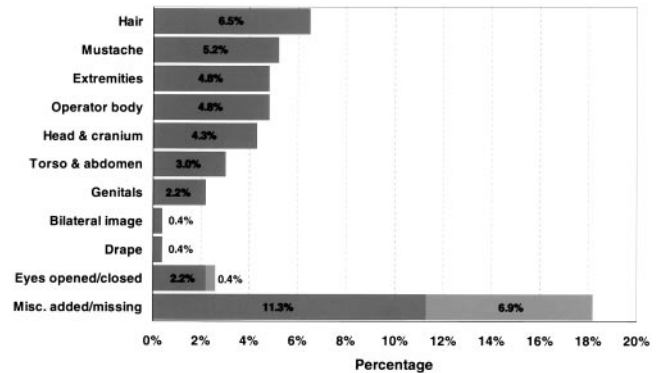


Figure 7. Figure 45 from Pauchet (left) and Figure 52 from Labat (right). Note that there is no difference in needle placement!

by contrast, was more aware of potential block complications and dedicated an important part of his book describing them. He also believed that proper selection of a block was the key to block success and determined his selection by the type of planned surgical incision: "...the anesthetist must be familiar with the technical details and possibilities of the proposed operation, so as to be able to anesthetize the correct operative field."¹³

Labat's book was filled with new observations and a new perspective to regional anesthesia. He emphasized that a proper understanding of the anatomy and technique was critical to the success of the block to be performed. Education of the operator, importance of complications, and the clinical relevance of proper

block selection were new themes in *Regional Anesthesia* (2). An extensive section on hernias and upper abdominal surgeries found in Labat's but not in Pauchet's book suggests an influence of the Mayo era on Labat's career.

Regional Anesthesia (2) gave more importance to education of the operator and the comfort and interest of the patient. Labat adapted regional anesthesia to reflect an evolution of knowledge and terms. Pauchet spoke of the yellow-white-green patient suffering of diseases of the gallbladder: "S'il s'agit d'une cholécystectomie, trois sortes de patients sont à considérer: les "blancs", les "jaunes" et les "verts" ... il n'en est pas de même des "jaunes" et des "verts", car ces malades, longtemps auto-intoxiqués, sont cachectisés à tel point que même l'anesthésie régionale chez eux n'est pas toujours sans

¹³ Labat p. 5.

danger. Aussi, il est recommandé de ne jamais faire d'injection préalable de scopolamine-morphine à ces malades et de leur injecter, dans l'organisme, le moins de toxique possible. . ."¹⁴ Labat spoke of jaundiced patients: "The use of morphin and scopolamin should be avoided in jaundiced patients, who, as a rule, have a blunt sensitivity to pain and are very sensitive to these narcotics as well as to the anesthetic drug."¹⁵ Labat's book was more detailed and better organized. From a surgeon's description of regional anesthesia, Labat presented a new anesthesiologist's view of regional anesthesia: "If the anesthesia is induced by the surgeon himself, his success will greatly depend on his skill in using the regional method, assuming that he has thoroughly mastered its principles. But the question is whether or not specialists in regional anesthesia will not, in the near future, be called to do the work for the surgeons, just as trained anesthetists are asked to administer general narcosis."¹⁶

Pauchet mentioned Labat by name seven times within *L'Anesthésie Régionale*, giving Labat credit for identification of anatomical relationships such as localization of the spinous process of T12,¹⁷ block preference and popularity such as the subclavicular approach to the brachial plexus,¹⁸ the posterior approach to splanchnic nerve block,¹⁹ use of intercostal block instead of paravertebral block for breast surgery,²⁰ level of dural puncture,²¹ and the description of a new regional technique: Labat's approach to the obturator nerve.²² Labat credits many other individuals throughout his text, including Kaposi, Bay, Broca, and Braun. Pauchet is only mentioned once in reference to blocking the tip of the nose.²³ It is also interesting to note that the description of the site of needle insertion for blocking the sciatic nerve at the level of hip: 3 cm along the perpendicular that bisects a line drawn between the greater trochanter and the posterior superior iliac spine is described in Pauchet.²⁴ Yet, this technique has currently been defined as the "Classic Approach of Labat" (9)

With few exceptions, techniques that were described in *L'Anesthésie Régionale* (4) also appeared in

Regional Anesthesia (2). However, Labat often included a second approach as well as advice for avoiding complications and increasing block success. For example, there were alternate methods for performing caudal and transsacral blocks,²⁵ the paresthesia technique for axillary block,²⁶ and an oral approach to blockade of the infraorbital,²⁷ maxillary,²⁸ and mandibular²⁹ nerves in *Regional Anesthesia* that did not appear in *L'Anesthésie Régionale*. Labat frequently summarized and numbered important principles at the end of a chapter, rendering the text clinically relevant and practical to the anesthesiologist. He described how to avoid vessel puncture and intraspinal injection during cervical plexus block,³⁰ appropriate technique to provide anesthesia to "any limited portion of the hand,"³¹ and procedures to minimize the risk of systemic toxicity after injections of large quantities of novocaine.³²

Conclusion

Regional anesthesia in the United States was popularized by Labat's book, and many physician anesthesiologists in the 1920s and 1930s learned regional techniques this way. In abdominal operations, regional anesthesia had been found to provide superior muscle relaxation with fewer complications than deep ether anesthesia. Europeans had performed these techniques several years before this knowledge was imported to the United States. Pauchet was one of many to be interested in this unusual form of anesthesia and his work, had it not been for the language barrier, could have represented the main reference textbook for American surgeons and physician anesthesiologists interested in regional anesthesia techniques. Labat, who had contributed to the third edition of Pauchet's book, understood its importance for the professional American audience, especially after spending several weeks at the Mayo Clinic.

After carefully reviewing and comparing the illustrations found in *L'Anesthésie Régionale* (4) and in *Regional Anesthesia* (2), approximately 73% of them have clearly been taken and copied from Pauchet's book. Despite Labat's statement about the secret of his book being "the clear, concise descriptions carefully illustrated by half-nude women," (2) there are only a few illustrations representing half-nude women, most of which are also found in Pauchet's book. Most of the details that were added or taken out by Labat were all

¹⁴ Pauchet p. 299-300. "If it is a cholecystectomy, three kinds of patients are to be considered: the "whites," the "yellows" and the "greens," . . . it is different for the "yellow" and the "green" ones because these patients have been auto-intoxicated for a long time, making regional anesthesia more dangerous. Therefore, it is recommended to never give a preliminary injection of scopolamine-morphine to these patients and to administer them as little toxic agents as possible. . ."

¹⁵ Labat p. 372.

¹⁶ Labat p. 5.

¹⁷ Pauchet p. 105.

¹⁸ Pauchet p. 156.

¹⁹ Pauchet p. 222 and 224.

²⁰ Pauchet p. 293.

²¹ Pauchet p. 335.

²² Pauchet p. 198.

²³ Labat p. 133.

²⁴ Pauchet p. 184-5.

²⁵ Labat p. 227-83.

²⁶ Labat p. 186-7.

²⁷ Labat p. 89.

²⁸ Labat p. 73.

²⁹ Labat p. 94.

³⁰ Labat p. 178.

³¹ Labat p. 331-2.

³² Labat p. 341-3.

analyzed and considered irrelevant to the comprehension and proper execution of the technique being shown or demonstrated by the illustration. Some illustrations were simply mirror images of Pauchet's illustrations and others were completed with bilateral views. The large majority of the legends are pure translations from French to English.

The overall content of the two books was found to be very similar, although Labat reorganized and added important details in *Regional Anesthesia* (2). Labat described regional anesthesia from an anesthesiologist's point of view, which demonstrates a change in perspective and heralded the movement toward physician specialization in anesthesia. Although *L'Anesthésie Régionale* appears to be a springboard for Labat's work, he clearly gave more importance to the education of the operator, patient interaction, and importance of anatomical knowledge and proper block selection.

Labat gained great fame in America from his publication. He contributed significantly to the world of regional anesthesia through his innovative ideas and well described techniques. Undoubtedly, Pauchet had a major influence on Labat's work and career. Labat, despite bringing a fresh perspective to regional anesthesia, definitely derived his book from Pauchet's but never acknowledged in the preface or in any other way the French surgeon who taught him the basics of regional anesthesia.

The authors thank Patrick Sim, MLS, Librarian, Wood Library-Museum of Anesthesiology, Park Ridge, IL for his kind and generous help in making Pauchet text available and Ms. Renee Ziemer and Alexander Lucas, MLS, Mayo Foundation Archive, Rochester, MN for their help in finding the original Labat material from the Mayo Foundation archive.

References

1. Bacon DR, Reddy V, Murphy OT. Regional anesthesia and chronic pain management in the 1920s and 1930s: the influence of the American Society of Regional Anesthesia. *Reg Anesth* 1995; 20:185-92.
2. Labat G. *Regional anesthesia: its technique and clinical application*. Philadelphia: WB Saunders, 1922.
3. Brown DL, Winnie AP. Biography of Louis Gaston Labat, MD. *Reg Anesth* 1992;17:249-62.
4. Pauchet V, Sourdat P, Labat G. *L'Anesthésie régionale*. Paris: Librairie Octave Doin, 1921.
5. Clapesattle H. *The doctors Mayo*. Minneapolis: The University of Minnesota Press, 1941:545, 614.
6. Anonymous. Advertisement. *Current researches in anesthesia and analgesia*. 1925;4:xiii.
7. Labat's and Pauchet's books fell under the international copyright laws referred to as the Berne Convention for the Protection of Literary and Artistic Works, first promulgated in 1886/1887. The first revision occurred in Berlin in 1908 and would be the act that governed these two books. The 1908 revision extended the copyright to the life of the author plus 50 yr. The United States was not a signatory to this convention until the 1950s and, therefore, Pauchet's book was not automatically copyrighted in the United States as it was in other signatory nations of the Berne Convention. History of copyright: a chronology, <http://www.musicjournal.org/01copyright.html> and copyright, <http://www.bartleby.com/65/c0/opyrigh.html>, both accessed November 1, 2001.
8. The chapter contents were examined as to the blocks described in both texts. Anatomy, techniques, indications, chapter organization and "pearls" for each block were studied. Similarities between the texts were noted, as were differences—especially items new to Labat's book or subjects unique to Pauchet. References to other authors or techniques were recorded, as well as the number of figures that were similar between the texts and those illustrations unique to Labat.
9. Bridenbaugh PO, Wedel DJ. The lower extremity somatic blockade. In: Cousins MJ, Bridenbaugh PO, eds. *Neural blockade in clinical anesthesia and management of pain*. 3rd ed. Philadelphia: Lippincott-Raven Publishers, 1998:378.