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Joseph-Claude-Anthelme Récamier (1774-1852): forerunner in surgical oncology

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Summary

Professor J.C.A. Récamier (1774-1852), the undisputed founder of modern gynecologic surgery, had also excelled in the field of oncology. In particular, he performed the first successful vaginal hysterectomy for cancer; he conducted extensive research on cancer metastatic process and he was the proponent of a cancer treatment method by compression.

Key words: metastases, Récamier, treatment of compression, vaginal hysterectomy

Life - studies - career

Récamier (Photo 1) was born at Rochefort-en-Bugey, on November 06, 1774. His father, François Marie, was the royal notary at Rochefort. His paternal uncle, Abbot Récamier, was his first tutor. He was a classmate of Professor of Surgery Anthelme-Balthasar Richerand (1779-1840) on the benches of the Josephites in Belley. He continued his studies at the Lamartine College. In 1792, he began his first medical studies at the city hospital, with a surgeon named Gonet, then to the hospital of Bourg where he met Xavier Bichat (1771-1802). The requisition took him to the school of health of Paris; he was then sent as a sub-assistant to the army of the Alps and his division participated in the siege of Lyon. He served in the ranks of the Republic while Bichat, his classmate at the hospital of Bourg, provided care to the besieged. After the surrender, Récamier left his division and went to Toulon to take service to the Navy. He embarked as first adjutant on the "Ça ira". Promoted to the rank of 2nd class surgeon, as a reward for his services, he left the Navy in July 1796. He first married the widow Mrs Poillevé de Gerinais. After her death in 1830, he married his second wife, Miss Boitard, and he became a widower again. On May 27, 1833, he married his third wife, the widow Mrs. de Villers. He got two sons from this marriage.

Photo 1. The eminent French surgeon Joseph-Claude-Anthelme Récamier.

His career can be summarized as follows:

1799: locum at Hôtel-Dieu hospital, where he introduced since 1802, the dogmatic and clinical medical education; 1806-1846: physician and Head of the Department at the Hôtel-Dieu hospital; 1820: member of the Academy of Medicine; 1821: Professor of Medical Clinic, replacing Pierre-Éloi Fouquier (1776-1850); 1823-1830: Chairman of Medical Clinic at the Hôtel-Dieu hospital; 1826-1830: Professor at the "Collège de France", replacing René Laennec (1881-1926); 1830: In 1830, as uncompromising royalist, he crossed by

bravado the revolutionists' barricades, to get to Council House, in full uniform of King's physician. The rioters told him: "You may be the King's doctor as long as you wish, but you are also people's doctor", and decorated the rear side of his frock coat with a tricolor cockade. Being a royalist but still independent, he resigned from all his functions and positions of honor (Academy of Medicine, Professor at the "Collège de France" and the Faculty) (14 resignations on the same day), when King Louis-Philippe demanded from his officials to take the oath. He was replaced at the chair of the Clinic of Hôtel-Dieu hospital by Auguste-François Chomel (1788-1858) and then he withdrew in Switzerland; 1846: honorary physician at the Hôtel-Dieu hospital. Récamier died of a cerebral stroke on June 28, 1852, in Paris [1].

As regards the fight between François-Joseph Broussais (1772-1838) and Laennec, Récamier, from the beginning, took position and sided with the latter, in the ranks of the anatomo-clinical school. He took part in every struggle given by this school against the physiological doctrine through the doctrinal conceptions he exhibited in his lectures, his therapeutic methods that were a constant protest against the systematic antiphlogistic medication and through the importance he gave to the pathological anatomy as well. Authoritarian, brave and well-known, Récamier is subjected to criticism. He founds the Medical Journal ("Revue médicale") with Jean-Bruno Cayol (1787-1856), where he defends the spiritual vitalism [2]. A circle of Catholic intellectuals joined him and frequented the salon of Madame Helvétius [3].

His medical work

Inherited from the antiquity and used as the "diopter" since the early middle Ages, the vaginal speculum is reinvented by Récamier in 1812 and who spreads its use [4]. He perceived and described the hydatid thrill. He treats fevers by balneotherapy. He treats empyemas with pleurotomy and siphoning, and he also incises parasitic liver cysts. In 1825, he performed the first puncture of hydatid cyst and the same year he began practicing the ablation of ovarian cysts and the dilatation of anal fissures. What is more, he introduces the colpotomy for the drainage of pelvic abscesses (Photo 2). In 1846, he invented the uterine curettage and the curette that bears his name [5]. He wrote books on hemorrhoids [6], about his own method of treating cancer by compression [7] and on cholera [8]. Moreover, he published articles and papers in medical journals and at the Bulletin of the Academy of Medicine.

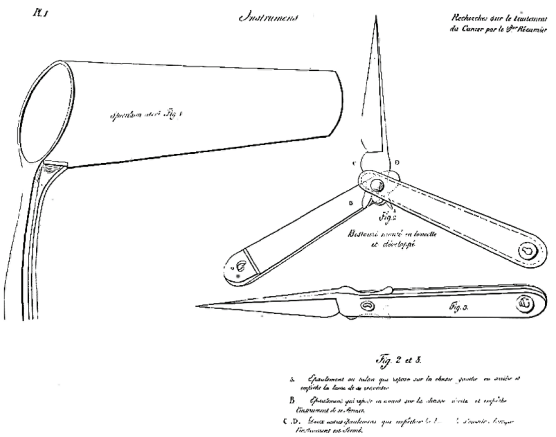

Photo 2. The vaginal speculum and several surgical instruments invented by Récamier.

His work on oncology

a) The propagation of a method for cancer treatment by compression

It has long been known that prolonged compression results in atrophy from asphyxia and the resorption of most tissues. The Arabs tried the method in order to restrain the progress of elephantiasis and to treat aneurysms of the elbow. During the 18th century, inflammations and some ulcers were combated this way. John Hunter (1728-1793) refers about neoplasms that "compression often prevents their development, and sometimes causes their destruction by absorption; but this means is not always effective and then excision is the only cure" [9].

Pierre-Joseph Desault (1738-1795), also applied compression in order to remove the "scirrhosities" of the rectum, by inserting tubes of variable size, to permit the passage of materials and to achieve accidental tissue resorption [10]. So, treatment by compression of malignant or benign tumors was not a novelty, since an English surgeon Samuel Young used it successfully for the first time in 1809 in the treatment of two breast tumors. Thereafter, he repeated the procedure successfully, and then he published his observations in 1815 [11]. This method met undeniable success in England, where medical journals recognized a certain importance. Young's book was reissued one year later, enriched with some new observations. In France, Dr. Louis-Joseph Robert had even classified the compression among a number of cancer treatment methods in his book "The art of preventing cancer" [12].

In 1817, Récamier, whose fame was immense, applied it on two breast tumors, of which one "was larger than the head of an adult". The procedure was suc-

cessful since the decrease of the volume that followed enabled the surgeons Anthelme-Balthasar Richerand (1779-1840) and Guillaume Dupuytren (1777-1835) to remove the residual masses. However, Récamier, still does not seem to have found these results quite satisfactory, since he waited until 1825 to repeat the experiment. This time, though, he achieved the healing of many breast cancers, which induced him to extend the practice to uterine or testicular cancers.

In his book devoted in 1829 to the apology of the "methodical compression", Récamier attacks the always more numerous supporters of the palliative method, by accusing them to accept the dogma of cancer incurability as fatality. To support his opinion, he cited numbers. Of 80 cancers subjected to compression, he achieved 30 complete cures, 21 improvements, 15 combined ablations and 12 failures [13].

Thus, the "methodical compression" had an unquestionable success. Several patients suffering from breast cancer turned to Récamier. Professors Joseph-Philibert Roux (1780-1854) in the Charité hospital, Jean-Louis Alibert (1768-1837) in the St. Louis hospital and Jacques Lisfranc de Saint Martin (1790-1847) in the Pitié hospital, adopted it. Récamier deployed prodigies of ingenuity to make his compression bandages perfect. He successively used buckskin, chamois, sheep suede, cotton wool carded "with bladders enclosed in a skin bag and distended with a pressure pump". He reinforced the compression using disks of elastic gum, lead and tin. He even imagined the use of "spring steel bandages with pads", but he had to abandon the idea due to the excessive pressure caused on the thorax. In the end, he returned to flannel bandages that he had used in the first place [13]. Later, surgeons began to develop devices suitable for all locations, permitting compression to tumors of the face, armpit, groin, perineum, abdomen and cervix.

In a period of 10 years though, a rapid disenchantment succeeded the euphoria. Besides, the compression supposed that cancer was a local disease. However, once the anatomo-clinical enthusiasm passed, clinicians returned to a more nuanced opinion and the notion of cancer diathesis took on increasing importance, putting the benefits of compression in contradiction with the new doctrine.

Certainly, Young, Récamier and their followers were in absolute good faith. In fact, it was rare at that time a breast tumor not to be considered as cancerous, and many benign tumors had been under the guise of cancer, reduced by compression. As for the actual cancers, although they were repressed externally, they were propagated in contrast internally!

The rejection of the compression method was so massive that Paul Broca (1824-1880) says that he had never seen it been used after 1840. He doesn't even grant this method's value of being real help in the treatment of adenomas and inflammation [14].

b) Performing the first successful vaginal hysterectomy for endometrial cancer

In 1825 already, Récamier removed a prolapsed uterus, using a ligature. On 26 July 1829, he went further, as he performed an excision of the uterus through the vagina with the skill of an accomplished surgeon [15]. Actually, he was not the first to perform this particular technique, since the Swiss Johann Sauter (1766-1840) had already performed this procedure in 1822.

The clearest description of a vaginal hysterectomy for carcinoma of the cervix was the one given by Récamier [16]. He also mentioned the use of ligature ties for the ligaments and the uterine arteries. His first operation was performed on July 26, 1829 [17].

The patient was placed in the lithotomy position. No mention was made of the vaginal speculum, the instrument he had recently re-introduced. The anterior lip of the uterine cervix was fixed with two strong hooked pincers, placed anteroposteriorly and laterally. Traction on the cervix was maintained and the organ lowered. A transverse incision of the vaginal wall was made above and below from left to right by means of a convex button-tipped bistoury directed upon the index finger of the left hand. The cellular tissue which separated the vagina and the bladder from the anterior surface of the uterus was separated. The peritoneum was opened and the index finger was introduced into the peritoneal cavity. This opening was enlarged from left to right by the use of a button-tipped "hernial bistoury", straight and rather blunt. The same bistoury served to cut from above downward the upper two-thirds of the left broad ligament, shaving the corresponding edges of the uterus to the furrow which separated it from the neck. This was done on both sides. The index finger of the left hand was also carried behind the remainder of the right ligament. The fingers served to fix the ligament and to guide a curved needle with a handle, pierced at that point, and armed with a strong thread intended to embrace the remainder of the broad ligament where the uterine vessels ram. The ligature was made by means of an appropriate instrument. Section of the ligaments and the fold of the peritoneum between the uterus and the rectum facilitated delivery. The operation lasted 20 minutes. Thirty ounces of blood were lost. The ligature threads were "laid along the groins". No dressing was applied to the parts. Récamier noted the postoperative course: 2nd day: pulse 90, belly slightly tumefied, without pain, re-

peated catheterization, bleeding of 6 ounces; cataplasms of linseed on the abdomen; 3rd day: pulse frequent, belly more meteorized and more sonorous, pain felt in the right iliac region; constipation; bleeding in the morning; 3 grains of calomel in 3 doses: 40 leeches to the right side of the belly; 5th day: fever abated; belly inflated; constipation; leeches, pills of belladonna; augmentation of meteorism; patient agitated; bath for half an hour; for the first time discharge of wind per bas; 6th day: some degree of sensitivity in the iliac region; leeches; bath; normal stool; 7th day: posterior part of bladder adherent to rectum, divided with the finger; vaginal irrigations of tepid water; 20 leeches to the loins; soup diet. From the 10th day on, there was gradual improvement [18]. Récamier was so pleased with his success that on the 31st postoperative day he called upon Professors René Caillot (1769-1835), Alexandre Désormeaux (1778-1830) and Emmanuel Patrix (1780-1840) to examine his patient. They noted on vaginal examination "le bon état du vagin". On the following day, the patient was examined by Antoine Dubois (1756-1837), Guillaume Dupuytren (1777-1835), Louis Charles Déneux (1767-1846), Louis-Aimé Fizeau, Gabriel Andral (1797-1876), Joseph Capuron (1767-1850) Jacques Lisfranc (1790-1847), Jules-Germain Cloquet (1790-1883), François Ribes (1765-1845) and Jacques Ratheau, all Professors of surgery or obstetrics of Paris. On the next day, the 33rd post operative day, the patient was seen by the Professors Jean-Nicolas Marjolin (1780-1850), Philibert-Joseph Roux (1780-1854), Jean-Baptiste Kapeler, Louis-Auguste Baudelocque (1800-1864), Pierre-Élie Fouquier (1776-1850) and Anthelme-Baltasar Richerand (1779-1840).

c) His research on cancer metastasis

As a great clinician, Récamier, in 1829, believed that cancer propagates through the veins. In fact, he described the invasion of the bloodstream by cancer cells and introduced the term "metastasis" to describe the spread of the disease [19].

Discussion

Of eleven excisions made outside of France, only a single patient had survived, just to die one year later of recurrence of her cancer. The first attempt in France obtained a similar success; Récamier was equally happy with James Blundell (1790-1878) of Guy's hospital, and his operated patient survived for almost the same time (she died on 12 June 1830); but for that year, it is enough to give a vogue for a moment to the excision of the uterus. Two months after the Récamier's operation, Roux, who never left anyone surpass him, had the opportunity to perform it twice, within 5 days. Both women died, the first within 30 hours, and the second within 24 hours. These setbacks subsided to some degree the enthusiasm; two cases of death, just as fast, arose the following year in Paris, in the hands of Récamier and Alexander Dubled, his disciple [20]. A third operation performed by Jacques-Mathieu Delpech (1777-1832) at the same time, with equally little success, succeeded in discrediting it to the surgeons judgement; the method met also many opponents at the Academy of Medicine meeting on July 13, 1830. Alexis Boyer spoke against it, and Dominique Larrey dealt the final blow, supported also by Étienne-Antoine Serres (1788-1866) and Dupuytren. Two years later, Alfred Velpeau (1795-1867) provided the final balance sheet of the operation (21 uterus excisions, 21 deaths) and suggested its definite ban. It could not be otherwise. The absolute confidence in the location of the cancer was needed to find the audacity to dare an operation, to which one out of 10 women did not survive [21].

Conclusion

Récamier, in the early 19th century, was one of the last physicians who had the honor of remaining a surgeon. Thanks to this quality (surgeon and physician), his contribution to both fields of medicine and surgery was immense.

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