

HISTORY OF ONCOLOGY

Popular palliative cancer treatments in 18th – mid 19th century

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Summary

In the 18th century cancer was an incurable disease and the only therapeutic approach was surgery which was accompanied with several life threatening complications. In the absence of effective cancer treatment, palliative approach was proposed by physicians. Compression, ligation, “cura famis”

and treatment by cold were four popular treatments in the 18th century provoking an outbreak of therapeutic illusions in cancer patients and physicians, before being lost in oblivion.

Key words: compression, cura famis, history of oncology, palliative care, Récamier's bandages

Introduction

The palliative treatment of cancer is not intended to cure the disease; it only seeks to limit the suffering. The illusion that some palliative remedies could miraculously cure cancer became a general idea in the 18th century proposed by several physicians, instead of bloody painful treatments. In the absence of effective cancer treatment, alternative approaches gained popularity. However, with the advent of medicine, the miraculous cures disappeared and traditional remedies became obsolete.

Palliative treatments of cancer in the 18th –mid 19th century

It was well known for centuries that a prolonged compression of a tissue could provoke atrophy and resorption, even of bones. Arab physicians were using this technique to halt the progression of elephantiasis and to treat the aneurysms of the elbow. In the 18th century compression was per-

formed for the treatment of tissue inflammation and cancerous ulcers.

John Hunter (1728-1793), one of the most famous surgeons of his day, mentioned in his book “Lectures on the principles of surgery” that compression could prevent the development of tumours and in some cases could destruct them by absorption [1]. Hunter actually believed that compression was interrupting the blood supply of tumours. However, he admitted that this method was not always effective and surgery was the only solution [1]. Around the same time, in France, the surgeon Pierre-Joseph Desault (1738-1795) sustained that compression could cure cancer. He was using dilatation by bougies and compression for the treatment of rectal strictures secondary to rectal carcinoma [2]. However, in the 19th century, his pupil, Guillaume Dupuytren (1777-1835) in his book “Leçons orales de clinique chirurgicale faites à l' Hôtel - Dieu de Paris” (Oral lessons of clinical surgery made at Hôtel-Dieu de

Paris) commented the ineffectiveness of Desault's method stating: "the action of compression is to diminish the congestion of the parts, but without removing the disease. By compression, tumours developed in the breast often disappear for a time; but the disease is subsequently re-produced and proceeds with more activity than before" [3].

The treatment of benign or malignant tumours by compression was not a novelty when in 1809, an English surgeon, Samuel Young conceived a method of treating tumours of the breast by continued compression. His approach had an undeniable success in England, his book became a best seller and medical journals gave it some importance [4]. In his turn, the French physician Louis-Joseph Robert (1771-1850) in his book entitled: "L'art de prévenir le cancer", classified the compression among the curative cancer's methods and proposed a gradual, artificial, long term compression combined with dietetic measures and leeches [5].

Five years later, another physician proposed the same approach for the treatment of cancer. It was the distinguished Professor of gynaecology to Hôtel Dieu Hospital, Anthelme Récamier (1874-1852) who applied compression in breast tumours. Récamier used bandages of linen or percale impregnated in agaric, instead of thin plates of gum elastic and lead. He also rejected the use of elastic bandages with cushion, preferred by his colleagues, for fear of changing the conformation of the thorax. In his book published in 1829 "Recherches sur le traitement du cancer par la compression méthodique simple ou combinée" (Researche on the treatment of cancer by simple or combined methodical compression) he extensively deals with the subject mentioning several cases of patients suffering from breast tumours who underwent compression [6,7] (Figure 1). For example, a 33-year-old Swedish lady presented to Récamier with several painful voluminous tumours, pigeon egg sized, in her breasts. After a careful physical examination Récamier decided to start the compression using agaric disks and percale bandages. Two months later the results were excellent as the tumours disappeared. The patient was carefully monitored for the next 5 months and she was free of symptoms [6]. With our current knowledge, we may assume that Récamier treated a fibrocystic disease of the breast and not a malignancy.

In his book, he mentioned 45 cases of breast tumours, of which 30 were treated with simple compression, 4 by cauterizations and compression, 5 by compression and ablation and 6 by a

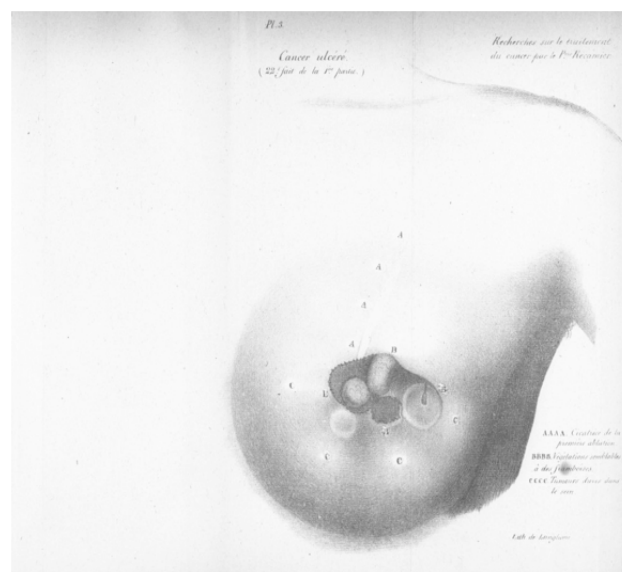


Figure 1. Depiction of breast cancer ulceration in the Récamier's book "Recherches sur le traitement du cancer par la compression méthodique simple ou combinée", 1829 (Source: B.I.U.M., Paris).

combination of the above mentioned treatments. However, of these 45 cases, 10 have failed [6]. Récamier's authority as physician was so great that his method, named also "methodical compression" gained such popularity that Professors Philibert-Joseph Roux (1780-1854) at Charité Hospital, Jean-Louis-Marie Alibert (1766-1837) at Saint-Louis Hospital and Jacques Lisfranc (1790-1847) at Pitié Hospital adopted it. His book was translated in several languages and commented by the medical journals of that time while his colleagues applied compression in different parts of the body such as at face, axilla, perineum, abdomen, even at the cervix.

The principal of compression was based in the belief that cancer was a local disease. After the application of a "methodical compression" a benign breast tumour disappeared while a malignant one had some local improvement and the disease continued to spread in the body. With the advent of pathology and surgery, physicians changed their notion in cancer and compression, over the next 10 years, became a contraindicated method, replaced by "cura famis", treatment by cold and others.

"Cura famis" or cure by starvation consisted of "starving" the cancer by starvation of the patient. In the 18th century, Dr. Claude Pouteau (1725-1775), a surgeon in Lyon, and some other physicians mentioned that their patients, suffering from cancer were following a water diet, drinking 5-6 pints of water daily. The treatment was lasting up to 40-50 days and the patients were cured [8].

In long term “cura famis” was proved ineffective on cancer progression and physicians conceived another palliative approach of cancer, the ligation.

The concept of ligation was attributed, according to Paul Broca (1824-1880), to the English anatomist William Harvey (1578-1657) who observed that the ligation of afferent testicular arteries deprived the testis of “nutrients” resulting in atrophy and necrosis. Initially, it was a method used for the treatment of testicular and scrotal tumours before being introduced in the treatment of cancer [9]. Jean-Pierre Maunoir (1767-1861), a celebrated surgeon in Geneva, was an advocate of castration in cases of cancer and ligation was widely practised for several cancers [10]. In the mid 19th century, the surgeons Broca and Alfred Velpeau (1795-1867) demonstrated that ligation was helpful only in benign tumours and the technique was abandoned [9].

Facing the failure or inadequacy of all therapies, some practitioners wondered if it was possible to destroy cancer by cold. The English surgeon John Hughes Bennett (1821-1875) wrote in his treatise “On cancerous and cancroïd growths” that “the external application of cold is one of the most powerful means we have to delay the progress of cancer” [11]. The theory was put in practice by James Arnott (1794-1885), a surgeon in Brighton (Figure 2). Arnott used a mixture composed by two parts of crushed ice and one part of salt, reaching a temperature of -15°C to -18°C . The cold mixture was applied to tumours for 15 minutes once a week. In 1850 Arnott published the results of 30 patients who underwent treatment by cold, stating that congealation could stop the inflammation, destroy cancer cells, prolong life and cure the disease if it is applied in early stages [12]. Between 1850 and 1853 a series of imaginary cancer cures by cold provoked an outbreak of illusions in cancer patients and physicians which ceased shortly afterwards as cold seemed to alleviate the pain and had no effect on cancer progression.

Conclusion

In the 18th and early 19th century physicians proposed several palliative treatments such as carbonic acid douches, cataplasms of laudanum or hemlock, belladonna ointments, opiate potions,



Figure 2. The English surgeon James Arnott (1794-1885), promoter of cryosurgery, photographed by Maull & Polyblank (Source: Wellcome Library, London).

aconite pills and others [13]. To all the above was added diet, rest and “the need to escape the sorrows or the sad passions”. Actually, the only therapeutic approach of cancer was the surgical operation which presented a high risk of complications and less efficacy. Cancer patients and physicians had to wait till the end of the 19th century and the appearance of vaccine or anticancerous serums to gain new but vain hopes [14]. However, their discovery paved the way for a new era in oncology, the cancer immunotherapy.

Finally, what it really impress us is that two variants of palliative treatments, the ligation and the treatment by cold are used till nowadays in oncology, in the form of angiogenesis inhibition and cryosurgery, teaching us that rationalism could be a timeless value in medicine.

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Corrections

- In 2015 Sep-Oct;vol.20 (5):1258-66 issue, the names of authors were mistakenly written as Rui Piao Y and Jin Z. The correct names are Yongrui Piao and Zhehu Jin , and abbreviated are Piao YR and Jin ZH .
- In the article by Jun-Jie Chen et al. (vol.21,no.1, pp 235-243, 2016 issue), in the acknowledgement for study support, the grant number was mistakenly written as 2011R50022-1. The correct number is 2011R50022-10. The authors apologize for this mistake.