Historical Landmarks in Head and Neck Cancer Surgery

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American Head and Neck Society
Erratum: On page 96 the seventh line of text should read "mother-in-law" instead of "mother" in reference to Queen Victoria.
HISTORICAL LANDMARKS
IN HEAD AND NECK CANCER SURGERY

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This book is dedicated to my wife, Charlotte Newsom Shedd, Master of Nursing, Yale, 1946, founding board member and former executive director of Hospice Buffalo, Inc.
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About the Author

Donald P. Shedd was born in New Haven, Connecticut and grew up in Keene, New Hampshire. Both his undergraduate and medical education were at Yale University. After an internship and two years of military service, he served a residency in surgery at Yale New Haven Hospital. He then was a member of the full time faculty of the Dept. of Surgery of Yale University School of Medicine from 1953 to 1967, where he was a Markle Scholar in Medicine. His research interests were in the radiologic study of the pathophysiology of swallowing in surgically altered patients and in the *in vivo* staining properties of oral cancer. In 1962 he worked with Project HOPE in Peru.

He became Chief of the Dept. of Head and Neck Surgery at Roswell Park Cancer Institute in Buffalo, New York in 1967, where he served until retirement in 1996. He conducted there research in the use of surgical measures for post-laryngectomy voice rehabilitation. Dr. Shedd was chairman of the education committee and, in 1977, was president of the Society of Head and Neck Surgeons. He was involved in two oral cancer survey trips to India, one with a US government team. His long interest in the history of medicine led to the writing of the present book.

Dr. Shedd and his wife live in Buffalo, New York. They have four children.
The advances in medicine over the past century and a half have been remarkable. Looking at one specific area of medicine gives one a view of the way in which overall scientific progress occurs. In the present instance, a look at the history of head and neck cancer surgery tells us much about medical progress in general.

One feature of advancement is the way in which gains in one field facilitate progress in another. An outstanding example of this is the way in which antibiotics, transfusion, and improved anesthesia led to sweeping changes in the practice of surgery. Such changes certainly did occur in head and neck cancer surgery.

The author’s medical career took place over the period in which cancer surgery of the head and neck defined itself as a recognizable specialty; this circumstance gives him an advantage in reporting the events. The story is told in the form of short biographical summaries of some of the men whose work made the advances possible. Although the focus is on cancer, the account of the development of thyroid surgery does not limit itself to malignant conditions.

Imagine that you are a doctor trying to help a patient with severe hyperthyroidism around the end of the nineteenth century, a time when the endocrine basis of this disease was not yet understood. You would try various medical measures, none of them effective. You might resort to cervical sympathectomy in the belief that this would relieve the life-threatening condition. Removal of part of the gland would not have been an option because of the frightening mortality figures of thyroidectomy in that era. Your patient might well die because of the lack of effective measures to control the disease.

Half a century later, subtotal thyroidectomy had become a standard form of treatment and the mortality rate had become acceptably low. It is this kind of progress that the present account attempts to relate through tales of the lives and work of individual doctors.
Introduction

General Considerations

The term "head and neck cancer" usually refers to neoplasms involving the upper aerodigestive tract and other related areas (but not including tumors of the brain; brain tumors fall under the domain of the neurosurgeon). The development of surgery for cancer of the head and neck is an interesting story. It involves many individuals from a number of countries, as well as the interplay of a number of disciplines. General surgeons, otolaryngologists, and plastic surgeons were the major contributors; input also came from a number of other fields. The story can best be told by giving brief accounts of some of the persons involved. The author realizes that he has not encompassed everyone of importance, but he has made an effort to gather information on a few of the leaders in the field.

While the full story actually goes back far into the overall history of surgery, the present account begins—somewhat arbitrarily, perhaps—with individuals born around the middle of the nineteenth century and concentrates on European and American figures. An excellent review of the overall timetable of events was presented by Dr. Jatin Shah in his 1998 article "The Making of a Specialty." 1 Articles reviewing the history of the subject were also written by Conley and Vonfraenkel in 1956 2 and by Goldstein and Sisson in 1996. 3

In addition to the present account of contributors to the field, attention is given in Section II to well-known persons who suffered from head and neck cancer in order to provide a perspective of the problem from the patient's viewpoint.

The two major American head and neck societies played an important role in the history of the subject; a brief account of their contributions is given in Section III. It is hoped that the reader will derive from this book a sense of the manner in which the field developed from its early stages to the present levels of achievement.

References


Section I

Major Contributors
Introduction

As one labors in the field of surgery, it is important to keep in mind the debt one owes to one’s clinical ancestors. One can see that the growth of knowledge is a step-wise process, with the steps sometimes being rapid and sometimes very slow. The men described herein provide examples of receptive minds being applied to clinical problems, with resultant improvement in the number of lives that can be saved from a horrible group of diseases.

In a work such as this, it is inevitable that the author will omit some important persons, both past and present. The individuals described here are ones whose contributions were of particular interest to the writer. Looking at this group of contributors, we are seeing approximately a century and a half of progress, from the 1840s to the 1990s. This was a very exciting period in the history of medicine in general, and in that of surgery in particular.

The individuals involved were from the United Kingdom, from the European continent, and from North America; the North Americans included one Japanese-American and one Armenian-American.

These participants came from three disciplines: general surgery, otolaryngology, and plastic surgery. In the period of time covered, otolaryngology was a field that was undergoing considerable change. Some of the individuals profiled here had a general interest in the cancer problem; some narrowed their interest to the head and neck area. One—Billroth—was a noteworthy contributor to a number of fields across the entire breadth of surgery.

There were sharply focused persons in the group, as well as others, such as Trotter and Billroth, whose talents ranged well beyond medicine. Trotter, for example, made a significant scientific contribution to the field of anthropology.

One of the group—Kocher—did work of such importance that he won a Nobel Prize for his elucidation of the physiology of the thyroid gland.
One clinician—Ward—displayed amazing tenacity in carrying out a highly productive surgical life in the face of major physical handicaps.

On the whole, this interesting group of physicians is representative of how progress occurs in a clinical setting, with the advances of one generation, if circumstances permit, being improved upon by the subsequent one.
Chapter 1

Billroth's Meaning to the Head and Neck Surgeon

by Donald P. Shedd, M.D., Pascal Fuchshuber, M.D., Ph.D.,
and Mark D. DeLacure, M.D.

Modern-day head and neck surgery is built upon the work of a long succession of predecessors, important among whom is the great German surgeon Theodor Billroth. Although his contributions in this field are considerable, he is better known for his role in the development of visceral surgery. Nonetheless, a brief account of his role in the development of cancer surgery of the head and neck is of value to the oncologist interested in the background of the specialty. Billroth played a major part in surgery of the larynx and contributed to knowledge in the care of the tongue cancer patient. He also led the way in demonstrating the feasibility of resection for carcinoma of the cervical esophagus.

Brief Account of the Man

Christian Albert Theodor Billroth (Fig. 1.1) was born on the island of Ruegen, Germany, in 1829. His father, a clergyman, died when Billroth was five years old. The family moved to Greifswald, where Theodor studied music; then, in Göttingen, he switched to the study of medicine. His student days continued in Berlin under von Langenbeck. Billroth's early achievements were so impressive that he was offered the chair of surgery in Zurich when he was thirty-one years old. He worked in that city for seven very productive years, during which time he and colleagues founded the Archives for Clinical Surgery. It was in Zurich that he published his important textbook of general surgical pathology and therapeutics, a work that went through eight editions and was translated into at least ten languages.
His rising prominence led to the offer of the chair in Vienna—considered at that time the capital of European medicine—which he accepted at the age of thirty-eight. He spent the remainder of his inspiring career in Vienna and died in 1894. Throughout his medical career, Billroth also maintained a deep involvement in music—as composer, pianist, and critic. His friendship with Johannes Brahms has been well described.²

**General Contributions**

This man stands as a true giant among surgeons, or, as Karel Absolon titled his three-volume study on Billroth, as “The Surgeon’s Surgeon.”³ He is credited with being, in 1881, the first to successfully resect a cancer of the stomach.⁴ He is said to have been one of the first to accurately and honestly report his results, both good and bad, in the surgical care of patients. He founded an impressive surgical dynasty that yielded nine major first-generation “offspring” and thirty-five in the second generation.⁵ He produced a major work on the history and treatment of gunshot wounds.⁶

Although he was slow to accept the idea of asepsis, he eventually embraced the concept and became a strong proponent of this critical advance in surgical care. His knowledge of pathology and anatomy was impressive (Fig. 1.2).

**Thyroid Surgery**

Although it is Kocher who receives much of the credit for early progress in thyroid surgery, Billroth, too, played an important role. In his early operations for goiter, the mortality was around 36 percent—so high that he suspended performance of such operations for a time. When he resumed at a later date with refinements in technique and instruments and with the advent of asepsis, the mortality was around 8 percent.⁷

**Laryngectomy**

The story of the first total laryngectomy⁸ is a fascinating tale on which detailed background is provided by Absolon.⁹ In 1870, the surgeon Czerny, a pupil of Billroth’s, had tried the operation in dogs and found that it was technically feasible. In 1873 Billroth was faced with a thirty-six-year-old teacher of theology who had a cancer of the larynx that had previously been subjected to cauterization. Billroth carried out a partial laryngectomy, which resulted in only a short period of benefit before the tumor recurred with respiratory obstruction.
A second partial resection was attempted, but in the course of the operation Billroth found that partial resection would not suffice to relieve the respiratory obstruction. He was faced with a difficult dilemma: whether or not to do an operation—total laryngectomy—that had never been done successfully in a human being. Was it justifiable to carry out such an operation in the presenting circumstances? Billroth’s intraoperative decision was that it was. The surgeon requested that the anesthetic be stopped so the patient could awaken, whereupon he asked for consent to total removal of the voice box. The patient did consent, and the operation was performed.
Closure of the pharyngeal defect was not done, so that an opening remained for use in vocal rehabilitation. Working with the surgeon Gussenbauer, a skilled instrument maker fashioned a reed device to fit into the opening, which allowed the patient to produce intelligible speech (Fig. 1.3). It is of interest to note that esophageal speech had been described prior to 1873 in patients with laryngeal stenosis, but Billroth chose to utilize the mechanical appliance instead.

The historic patient made a satisfactory recovery and was discharged from the hospital approximately two months after the operation. Unfortunately, he developed a recurrence and metastases; thus only a short period of survival resulted. Once the feasibility of the operation had been shown, it remained for clinicians to determine its indications and contraindications.

In an 1883 book on larynx cancer by Butlin, the question of the justification for total laryngectomy was addressed. The results reported to that date included so few cures that one could well wonder if the operation should ever be done. Butlin concluded that, despite the poor results, the operation was justified in cases of true intrinsic laryngeal cancer as opposed to cases of pharyngeal carcinoma. Interestingly, in 1887 when the Prussian Crown Prince (later Emperor Friedrich III of Germany) had a diagnosis of probable cancer of the larynx, the operation was not done. The reasons behind the decision were complex and are beyond the scope of the present account.
Billroth is thus credited with the first successful total laryngectomy, a feat that is listed alongside such firsts as gastrectomy for cancer and the experimental demonstration of the feasibility of resection for cancer of the cervical esophagus. This versatile surgeon is highly regarded by historians not only for his firsts, but also for his remarkable record of educating surgeons who filled many of the major academic posts in Europe.

**Tongue Cancer**

Operating on a medium-sized tongue cancer by the peroral route is a technically difficult matter because the abundant bleeding makes visualization very difficult. In the early years, various methods of reducing the bleeding—such as ligation of lingual arteries—were tried, but these resulted in only limited success. (Absolon provides a comprehensive account of the early years of treatment for tongue cancer.12) It is understandable, therefore, that surgeons like Regnoli (1838) and, later, Billroth would seek to develop better methods.

Billroth was one of those who sought more adequate exposure. A wider view achieved through submandibular or mandible-dividing approaches permitted excision with more adequate margins. At the same time, the approach via the neck led surgeons to remove involved cervical lymph nodes, and this raised the cure rates. The work of Butlin13 and others led to more widespread acceptance of adequate rather than limited operations in the treatment of cancer of the tongue.

**Esophageal Resection**

Billroth contributed to the growth of knowledge in another aspect of head and neck surgery. He performed many autopsies, in the course of which he came to believe that one might be able to resect certain cancers of the cervical esophagus. He carried out dog experiments,14 resecting segments of around 1.5 inches, and found that satisfactory healing would take place. Whatever stenosis occurred could be dilated, and dogs that had undergone the procedure were ultimately able to eat solids. Building upon this work, Mikulicz-Radecki was subsequently able to carry out the procedure in human subjects.15

**Conclusions**

It is difficult to find an individual who contributed as much to the growth of knowledge of surgery as Billroth. He was the right man in the right time and place. One can well imagine the number of patients otherwise doomed to a miserable death from larynx cancer whose lives were
saved after Billroth demonstrated the feasibility of total laryngectomy. It is clear that the price in terms of vocal disability was high for these patients, but as methods of speech rehabilitation developed over subsequent years, that disability became greatly reduced.

References


Chapter 2
Theodor Kocher’s Legacy to the Head and Neck Surgeon
by Donald P. Shedd, M.D., Pascal D. Fuchshuber, M.D., Ph.D.,
and Mark D. DeLacure, M.D.

Surgeons who use the Kocher clamp may or may not know that the surgeon who devised this instrument won a Nobel Prize for his work on the thyroid gland. He was the first surgeon to be so honored. There is much more of interest about this important figure in surgical history.1

Background

Born in Switzerland in 1841, Theodor Kocher (Fig. 2.1) was the son of an engineer. He studied at the University of Bern, graduating in 1861. Following a stay in Berlin, he continued his studies in London, Paris, and Zurich. In the latter city, he came under the influence of Billroth. Kocher returned to Bern in 1866 to pursue further surgical education. In 1869 he married the daughter of a local merchant; they had three sons, two of whom became physicians.2 After considerable controversy concerning another candidate, in 1872 Kocher was appointed director of the surgical clinic in Bern at the age of thirty-one. He served with great distinction in that post for some forty-five years and achieved a high level of fame.

Accomplishments and Honors

The focus of concern in the present account is Kocher’s work in thyroid surgery, but he is well known in other areas, as well. The rotation-elevation method of reducing a shoulder dislocation is named for him, as is the right subcostal incision used for gall bladder surgery. The maneuver
for surgical mobilization of the duodenum also carries his name. His textbook contains a description of his aggressive approach to oral cancer, which entailed utilizing midline division of chin, lip, and mandible to provide adequate access for the removal of large tumors.

Kocher received a number of honors in his lifetime, including the presidencies of the German and Swiss Surgical Societies and of the 1908 International Surgical Congress. His greatest honor was the Nobel Prize in medicine or physiology, awarded in 1909 for his work on the physiology, pathology, and surgery of the thyroid gland. He recognized that in those patients on whom he performed total thyroidectomy, the severe syndrome they developed was a consequence of loss of some vital substance derived from the gland. He applied the term “cachexia strumipriva” to this condition. After recognition of the consequences of total thyroidectomy, Kocher was careful to leave a small amount of thyroid tissue in every patient unless there were special circumstances mandating total removal.

It is of interest to note that there was a long-term friendship between Kocher and William Halsted, and that the latter gave heavy credit to Kocher in his publication “The Operative Story of Goiter.”

Kocher’s Approach to Goiter

Kocher authored a very comprehensive textbook of surgery, and it carried excellent illustrations of operations (Figs. 2.2, 2.3, and 2.4). He devoted a long section to achievement of asepsis in surgery, and his mortality figures suggest that his efforts to avoid infection had a high level of success.

It is of interest to note that as late as 1866 there were serious reservations about thyroid surgery, as exemplified by the following quotation from the writings of Samuel David Gross, an eminent American surgeon whose views on thyroid surgery were expressed in these terms:

Thus, whether we view this operation in relation to the difficulties, which must necessarily attend its execution, or with reference to the subsequent inflammation, it is equally deserving of rebuke and condemnation. No honest and sensible surgeon, it seems to me, would ever engage in it.

Because Switzerland was an endemic goiter area, Kocher saw many patients suffering from this condition. The section in his textbook on surgery of the thyroid gland conveys a picture of why this meticulous operator was so successful as a thyroid surgeon. There are interesting features of his technique. For example, he would leave all the hemostatic clamps—numbering fifty to 100—in place during the course of operation, holding off on ligation of vessels until the end, because he believed that the suture material left in place during the course of operation would contribute to infection.
There is an account in Kocher’s book of how his method differed from that of Billroth: Billroth used an oblique neck incision, affording less satisfactory access, while Kocher carefully preserved the strap muscles, which Billroth apparently did not do. (Kocher felt that this preservation lessened the deformity.)

In his book, Kocher’s main attention is paid to complete extirpation of the goiter; however, he does include descriptions of techniques for enucleation of adenomas when specific indications for the lesser procedure exist.

**Kocher’s Views on Thyrotoxicosis**

By the time he was working on the fifth German edition of his book, Kocher had operated on 200 patients with hyper-functioning goiter, with a mortality rate of 4.5 percent. He felt that the mortality was primarily due to “toxic myocarditis.” To reduce mortality in the severely toxic patient,
Fig. 2.3. This drawing shows Kocher’s method of delivery of a large goitrous gland out of the incision after ligation of lateral vessels.

Fig. 2.4. Kocher passed a special instrument, depicted in this illustration, under the upper polar vessels in order to isolate them.
he advised ligating one or possibly two of the thyroid arteries and postponing excision until the patient’s condition had become more stable. In his writing, Kocher displays great respect for the difficulties of operation in thyrotoxic patients. He states the situation in these terms: “No practitioner, unless he has had considerable experience in goiter operations, should venture on an excision for Basedow’s disease.”

Thyroid Cancer

Kocher stresses the importance of getting well around the tumor in operations for cancer of the gland, even to the extent of removing esophageal musculature if it is involved. He states that the general principles of surgery are similar to those for non-malignant conditions.

Conclusions

Becker lists three factors of importance in the advancement of thyroid surgery: Lister and antisepsis, wider use of artery forceps, and Kocher’s succession to the Bern surgical chair.

As one looks over the lifetime achievements of Kocher, it is easy to see why Becker gives him such a prominent place in surgical history. By the time Kocher’s life ended in 1917, the total number of thyroid operations in his clinic had exceeded the 4,000 mark, with very low mortality figures. His work and his writings brought thyroid surgery within reach of many well-trained surgeons. This meant that relief could be brought to individuals afflicted by goiter in many parts of the world.

References

Chapter 3
Nicholas Senn’s Contributions to Head and Neck Surgery

Any account of the history of head and neck surgery must include reference to Nicholas Senn, who was born in 1844 and died in 1908. This man was a prolific writer, and some of his writings portray a vivid picture of head and neck surgical oncology of his time. It is said that his writings, including personal logs, filled 160 volumes.1

Background

Born in Switzerland, Nicholas Senn (Fig. 3.1) was brought by his parents to live in Wisconsin at the age of eight. He studied medicine in Chicago and later went to Munich, where in 1877 he received a Ph.D. in surgery. After returning to Chicago, he became professor of surgery and surgical pathology at Rush Medical College, a position considered the most important surgical appointment in the West at that time.2

Senn was an important figure in American medicine of his day, serving in 1887 as president of the American Medical Association. In addition, he served with distinction in the Spanish-American War and later founded the Association of Military Surgeons. He did extensive traveling, usually in connection with his medical interests, and wrote in detail about his journeys.

Senn was married to Aurelia Muehlhauser of La Crosse, Wisconsin, and fathered two sons, Emanuel J. and Dr. William N. Senn.
Contributions to Surgery

Nicholas Senn’s interests ran the gamut of the entire field of surgery; his contributions based on experimental studies on animals were the source of his early recognition. His book *Experimental Surgery* \(^3\) covered such wide-ranging topics as fractures, visceral injury, and air embolism; he also wrote books on intestinal surgery, \(^4\) surgery of the pancreas, and surgical bacteriology. \(^5\)

Of particular interest is his book *Pathology and Surgical Treatment of Tumors* \(^6\) (Fig. 3.2), which features 478 engravings and 112 full-page
color plates and contains chapters on tumors in plants and animals, as well as on the anatomy and biology of human tumors.

He refers to methods of tumor removal in use at the time, such as the ecraseur, an instrument designed to crush the base of a tumor, and galvano-caustic wire. There is also a section on the injection of erysipelas toxin as a treatment for tumor.

Senn recognized that for some tumors, good treatment required not only removal of the tumor itself but also removal of adjacent lymph nodes. He states bluntly: “The surgeon who operates with a view of securing a good cosmetic result is very liable to perform an incomplete operation.”

His book contains a detailed account of surgical treatment of tumors of various head and neck sites, including lip, eyelids, oral cavity, and thyroid gland.

Arguing against a too-conservative approach to surgical treatment of cancer, he states that “radical excision for cancer of the mouth requires an extended incision.” Regarding the natural history of oral cancer, he notes that “extensive tumors often recur even after extensive operations.”

**Approaches**

Describing tongue cancer, Senn indicates that the causative factors include psoriasis and ichthyosis. In his era, syphilis, too, was a not-uncommon precursor to lingual cancer (Fig. 3.3). He tells us that primary tumors seldom if ever occupy the posterior third of the organ, an opinion quite different from that held today.

The author describes various approaches to tongue surgery, including the incision utilized by Kocher for access through the upper neck, and illustrates the method described by Langenbeck (Fig. 3.4) in which the mandible is divided laterally to provide adequate exposure, as well as the method ascribed to Regnoli and Billroth (Fig. 3.5) in which the tongue is delivered through a submental incision prior to excision. He also illustrates utilization of several types of constricting sutures in extirpations ranging from small tip excisions (Fig. 3.6) and hemiglossectomy (Fig. 3.7) up to total glossectomy (Fig. 3.8). His impression of the natural history of tongue cancer is that there is a strong probability of death within two years of diagnosis.

Senn is more optimistic in describing total glossectomy, indicating that the operation is followed by satisfactory speech and swallowing, a
Fig. 3.4. Langenbeck approach to neck.

Fig. 3.5. Submental approach of Regnoli and Billroth.
statement that would require some qualification in modern thinking. He makes an interesting reference to individuals in Persia who had undergone removal of the tongue as a form of punishment yet managed to regain reasonable speech.

With respect to tonsil cancer, he states that this is a rare lesion, and that “removal of tonsil cancer is one of the most difficult operations in surgery”—another instance of a different outlook from the present one. The approaches Senn describes are based on the work of Langenbeck and Mikulicz (Fig. 3.9).

Although Senn does not delve deeply into reconstructive techniques, one illustration (Fig. 3.10) does show a method of rhinoplasty after removal of a cancer of the nose.
Fig. 3.7. Use of constricting suture in hemiglossectomy.

Fig. 3.8. Use of constricting sutures in total glossectomy.
Fig. 3.9. Langenbeck’s approach to tonsil cancer.

Fig. 3.10. Depiction of rhinoplasty in Senn’s book.
In describing surgery of the parotid gland, Senn informs us that the first operation in the U.S. was performed by the father of J. Collins Warren of Boston. Senn states that one should expect that all operations for cancer of the parotid gland will be followed by permanent paralysis of the facial nerve, an opinion not supported by today’s approaches to tumor management.

Describing thyroid cancer in his era, Senn considers that the results of operation are not encouraging, and that the disease will always be fatal within a year of diagnosis. It is interesting to note how progress since Senn’s time has resulted in a much brighter picture.

Regarding technical details of operation, Senn describes one approach to avoidance of aspiration of blood into the larynx during major intraoral operations and recommends the use of “partial anesthesia” so that the patient’s cooperation can be elicited in clearing secretions. Such a method must have required great stoicism on the part of the patient.

Conclusions

Nicholas Senn was described as being short and stocky, with a hustling nervous step and a keen temper. He was warm-hearted, impulsive, and indefatigable. It is stated that he was clean of speech and religious without being specific in his faith.

Senn suffered from some form of interstitial myocarditis. On a trip to high-altitude areas in South America, he developed complications that forced him to return home and then led to his demise at the age of sixty-four.

Clearly a significant figure in American surgery, Senn was one of the first to command a vast surgical service. He is said to have lacked the gift of attracting a large circle of followers; thus his influence on surgery was mainly from his numerous written works, and it is by these that he will be remembered. An article by Salmonsens provides a complete listing of his publications, which total approximately 300.

The long and scholarly section on pathology in Senn’s major book is evidence that he worked long and hard to understand the relationship between gross and microscopic changes in tissues. The degree to which he succeeded in conveying this relationship is arguably his major contribution.
References


Chapter 4

The Work of Henry T. Butlin, an Early Head and Neck Surgeon

A name that often appears in the older literature on head and neck cancer is that of Butlin. Who was this man, and what were his contributions to surgical knowledge?

Family and Personal Data

Henry Trentham Butlin (Fig. 4.1) was born in 1845 and lived until 1912. He was the fourth son of the Reverend William Wright Butlin, vicar of Penponds, Cornwall, and his wife, Julia Trentham. His paternal grandfather was a physician. Butlin’s wife was Annie Tipping, daughter of a merchant of Hemel Hempstead. They had two daughters, as well as a son who was killed in action in 1916 in the European war.

Butlin trained himself in public speaking so he could deliver lectures without reference to notes, as he did when presenting the Hunterian oration. In keeping with the role of a European physician, he became fluent in French, German, and Italian. He was described as being slight of frame and not very robust. He was a capable lawn tennis player and also had an interest in horsemanship.

Honors

For his many medical contributions, Butlin was made a baronet; his son succeeded to the title. He was the first dean of the faculty of medicine of the University of London and president of the British Medical Association, as well as president of the Royal College of Surgeons in 1909. Honorary degrees came his way, including an LL.D. from the University of Birmingham and a D.C.L. from the University of Durham.
Medical Contributions to Oncology in General

Butlin wrote several books on malignant disease, some on general considerations and some on specific sites, including the tongue, a subject on which his publications appeared not only in English, but also in French and German.

One of his most important books was on the operative treatment of malignant disease. Dedicated to his mentor, Sir James Paget, this major treatise on carcinoma and sarcoma summarized English surgical opinion on the subject as of 1887.

He devoted chapters of the book to throat and neck, larynx, and thyroid; alimentary canal and urogenital organs were also covered. He recognized that, in most instances, curing a cancer patient necessitated removal of the entire involved organ: “Of the desirability, nay, the necessity, for the complete removal of some organs when an operation is undertaken for malignant disease, there can be no question.” Excepted from this consideration was the tongue.

In one section of the book he decries the use of surgery as a form of euthanasia, feeling that there are better methods.

Regarding the respective roles of ablative and reconstructive surgery, he states:

It may be thought that I ought to have taken into consideration palliative and reparative as well as curative operations. On the whole, however, I have thought it better not to do so, partly on account of the great increase of bulk which this book would have attained, and partly on account of the difficulty of knowing where to stop. The scope of the work has therefore been limited to the methods and results of radical or curative operations.

Likewise, in his section on lip cancer, he notes:

The disfigurement which necessarily results from operations such as these may be lessened by plastic operations, but it is not within the province of this work to describe the operations which can be practiced with advantage.

Butlin accords a definite place to the use of caustics when extirpation of tumors is not feasible. The preparation used, made from zinc chloride, was called “Vienna paste.”

Statistics on success of treatment in Butlin’s day were interesting, as exemplified by one series in which there were 106 survivals out of 277 operations, a 38 percent survival rate. The cure rate may be partly affected by the fact that nodes were removed only when palpable, which probably resulted in a significant incidence of local lymphatic recurrence.

Mortality rates from Butlin’s era are impressive. The figures varied, with one series showing 138 deaths out of 364 cancer operations (37 percent), which Butlin considered “an awful mortality rate.” In that series,
there were fifty operations for thyroid cancer, with thirty deaths. He re­
commended the use of tube feeding to prevent feeble older patients from
dying of exhaustion.

Butlin is credited with being a pioneer in correlating microscopic
pathology with clinical disease states. In recognition of his skill, he was
made a member of various British pathology organizations. He did much
of the preparation of tissues for microscopic study himself, and his wife
catalogued the slides.

Medical Contributions to Head and Neck Oncology

Butlin’s book on diseases of the tongue,\textsuperscript{5} based on his experiences in
the throat department of Saint Bartholemew’s Hospital, was published in
1885. This beautiful work is illustrated with a series of chromo-litho-
graphs of very high quality (Fig. 4.2). Part of a series called Clinical
Manuals for Practitioners and Students of Medicine, the book covers acci-
dents, diseases, and congenital defects, as well as neoplastic conditions.

Some of the illustrations show syphilis of the tongue, a condition
that was not rare in the late nineteenth century. The disease was recog-
nized as one of the causative factors in tongue cancer, along with spirits
and smoking. The “three s’s”—syphilis, smoking, and spirits—constituted
a mnemonic used by medical students of that era.

Butlin describes well the natural history of tongue cancer, including
the end stages, which he depicts thus:

\begin{quote}
A large majority of patients die of slow exhaustion increased in some
instances no doubt by small bleedings. Exhaustion is due to several causes,
to pain, to profuse salivation, inability to take sufficient food, sleeplessness,
suppuration, and, in some instances, sloughing of the cancer. When the
patient is in a state of extreme exhaustion, the final blow is sometimes
administered by a low form of pneumonia which is more commonly
observed in those who die after removal of the disease.
\end{quote}

Butlin poses the question “Does complete recovery ever take place
after an operation for an undoubted cancer of the tongue?” According to
his table of results, the answer is yes: Of the eighty patients listed, seventy
were treated by operation; there are records of the survival in good
health of seven of the patients more than a year later. Such a figure is
indicative of major differences in the disease and its treatment a century
ago as compared with the present.

Operative mortality was formidable in Butlin’s era, even in the hands
of an expert. Of the seventy patients he treated surgically, eight died from
causes directly related to the operation. In five of these, the cause was
pneumonia, either alone or associated with “general blood poisoning”;

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Fig. 4.2. Illustration (black-and-white reproduction of what was originally a color plate) from Butlin's book *Diseases of the Tongue.*
three patients died from hemorrhage, tetanus, and cellulitis, respectively. Butlin's description of a post-operative death is very detailed:

The progression of the inflammation is very rapid; the breathing increases in rapidity and is more and more difficult. The complexion grows more and more dusky, the pulse still quickens, and is weaker until death takes place, all within forty-eight hours or even less after the onset of the pneumonia. The mouth is dreadfully offensive. It is almost impossible to correct the stench.

Various approaches to the tongue are described, including one in which the author splits the cheek in line with the commissure to achieve better exposure. He also quotes Kocher's description of a more extensive operation. Pictures of Kocher's incision are shown, utilizing a submandibular approach (Fig. 4.3). The whole operation is done under carbolic spray. The patient is fed partly by rectum, but feeding is also accomplished by a tube through the pharynx during the twice-a-day dressings.

In addition to definitive surgery, Butlin describes some of the adjunctive procedures utilized. These include division of the lingual nerve to relieve pain, which, he states, also relieves excessive salivation. Ligation of the lingual artery is described as a measure to control severe

Fig. 4.3. Diagram of incisions used by Kocher in his approach to tumors of the tongue.
hemorrhage. Iodoform powder is used to correct the stench of lingual cancer, with attar of roses added to counter the disagreeable smell of iodoform.

Butlin was a major force in reviving interest in thyrotomy as an approach to treatment of laryngeal cancer, the operation having fallen into disrepute from its over-application to advanced disease. Butlin was able to show the usefulness of thyrotomy when applied to relatively early larynx cancer. When he wrote his book on diseases of the larynx, he wrestled with the question of the justification for performing total laryngectomy. He did not feel that there was conclusive evidence either for or against the operation and recommended that the operation be considered in the treatment of intrinsic carcinoma of the larynx. Butlin was also one of the early proponents of the use of cricothyrotomy in the establishment of an emergency airway.

The interest of a leading general surgeon in matters laryngological was somewhat unusual, in that laryngology was not in Butlin’s day considered an important specialty (one writer even referred to it as a “Cinderella” specialty). Butlin’s interest was definitely a factor in elevating laryngology’s status.

Final Days

It is a tragic coincidence when a physician suffers from a disease that has been a major area of his professional interest. Butlin’s death was brought about by cancer of the larynx, a disease that was one of his foci of scientific concern. In November of 1911 he was scheduled to deliver a lecture to the Royal College of Surgeons on “Unicellula Cancri, the Parasite of Cancer,” a subject that had long been of interest to him; however, his failing health and loss of voice required that the presentation be done by a colleague instead. He resigned the presidency of the British Medical Association in that month and took to his bed, where he remained until his death in January of 1912. A few months before his retirement he had been made a baronet by King George V upon the occasion of the coronation, a fitting honor for this great surgeon.

Summary

Progress can occur when a clinician with the right kind of mind confronts the right kind of challenging clinical load, as was the case when H. T. Butlin worked in the throat clinic at Saint Bartholemew’s Hospital in the nineteenth century. Butlin’s contributions were significant, and surgeons of later generations are indebted to him for his persistent efforts and diligent work in the field of surgical oncology.
References


Chapter 5

Head and Neck Surgery in the Time of Roswell Park

by Donald P. Shedd, M.D., and Mark D. DeLacure, M.D.

Dr. Roswell Park is remembered as the founder of the first institution in the world devoted to cancer research. An early name of this institution was the New York State Institute for the Study of Malignant Disease; later, it became the Roswell Park Cancer Institute. Park was also a surgeon of considerable interest whose concerns included care of the head and neck cancer patient. This presentation looks in detail at some of his activities in this field and attempts to give a picture of head and neck oncology around the turn of the century.

Background

Roswell Park (Fig. 5.1) came from a highly academic background. His father, also named Roswell Park (1807–1869), was the founder and president of Racine College in Wisconsin. The father published an encyclopedic book in which he attempted to cover in a systematic fashion all human knowledge.1

Park was born in Pomfret, Connecticut, in 1852 and lived until 1914. After completing his education at Northwestern Medical University, he came to Buffalo as chair of surgery at the then-University of Buffalo and surgeon-in-chief of the Buffalo General Hospital. The year was 1884, and he was thirty-one years old. There was some controversy over the appointment of such a young man to such a high post; however, Park proceeded to demonstrate, through his operations and through his writings, that he was a very capable surgeon and scholar.2
General Aspects of Surgery in Park’s Time

One of Park’s major textbooks provides an interesting look at some of the adjunctive measures of his day. For example, he depicts an early insufflation device used to deliver anesthetic agents (Fig. 5.2); illustrates a method of delivering artificial respiration that involved the use of assistants to raise the patient to a head-down position (Fig. 5.3); and even describes a measure to be used when the anesthetized patient “is forgetting to breathe”:

In such cases, the most valuable expedient is the dilatation of the sphincter ani, which may be stretched with a speculum or with the fingers. Long drawn, even gasping inspiration may follow this expedient.

A surgeon’s approach to disease is clearly influenced by his concept of the causation of that illness. In Park’s case, he held strongly to the opinion that cancer was a condition of parasitic origin. This belief was partly founded upon the visualization in tumors of microscopic inclusion bodies that were thought to be the causative agent.

Fig. 5.2. Souchon’s nasal inhaler, a method of anesthesia delivery of use in operations on the head and neck.
Thyroid Surgery

It is instructive to look at the state of thyroid surgery in the period just before Roswell Park. Between 1860 and 1866, Billroth, in Zurich, carried out twenty thyroidectomies. The mortality rate was 40 percent, with seven deaths due to sepsis and one to hemorrhage.4

Park was working in an era when the hormonal cause of thyrotoxicity was not yet known. There was an opinion that the parathyroids were somehow involved in the “toxemia” of the Graves’ disease patient. The sympathetic nervous system was felt to be a factor in the disease, and this viewpoint carried sufficient strength to make cervical sympathectomy a definite alternative in the treatment of hyperthyroidism (Fig. 5.4). Park’s book contains a section on factors involved in the choice between sympathectomy and thyroidectomy.

Park’s mortality in surgery for toxic goiter was in the range of 12 percent; one of the factors in this statistic was shock. By comparison, in 1908 Dr. Charles Mayo reported a mortality of 6 percent. To prevent shock, Park used the pneumatic pressure suit devised by George Crile as an adjunct in carrying out thyroid surgery (Fig. 5.5). Park was one of the
surgeons who, early on, advised frequent check of the blood pressure during thyroid surgery. In part, the mortality may have been influenced by the tendency of internists to wait until the disease was far advanced.
before consulting a surgeon. Park quotes an unknown source in this regard, saying, “The resources of surgery are seldom successful when practiced on the dying.”

One technical feature of interest in Park’s thyroid surgery was his description of doing the operation under local anesthesia so that the patient could be asked to phonate during the operation, thus giving indication of possible surgical injury to the recurrent laryngeal nerve.

Park’s overall assessment of operations on malignant disease of the gland: “The surgeon should be prepared to abandon the operation before its completion. Death on the table is not unusual in such cases.”

**Surgery for Tongue Cancer**

In his section on tongue cancer, Park states that when the disease has progressed to such an extent that hemiglossectomy is being considered, it is probably better to remove the entire organ. It was his impression that patients will frequently develop satisfactory speech despite the removal of the whole organ and that their swallowing ability will also be acceptable. He describes three approaches to total glossectomy: (1) The Whitehead procedure via the peroral route, a method that he does not condone; (2) the Regnoli-Billroth method via a transverse midline sub-mandibular route; and (3) the lateral transcervical method advocated by Kocher, which permits a satisfactory exposure for removal not only of the primary tumor, but of involved lymph nodes, as well. Park states that “tracheostomy may be necessary in some cases.” He addresses malignant tumors of the jaw; one drawing in his book shows his approach to mandibulectomy (Fig. 5.6).

**Neck Tourniquet**

Boldness in surgery is an interesting concept. Park displayed this quality in his attempt to remove a large and highly vascular tumor from the base of the skull of a young man. Following the lead of Nicholas Senn of Chicago, Park utilized a tourniquet around the neck, passed behind the trachea, in an effort to control blood loss. While this technical adjunct did make it possible for the surgeon to remove the tumor, the patient survived for only one day.\(^5\)
Laryngeal Surgery

Park’s account of what was probably only the fourth laryngectomy in the U.S. is an interesting depiction of surgery in his era. By Park’s report, the operation went well from a technical standpoint; however, there was a significant post-operative complication: The patient went berserk and attempted to jump out of the hospital window. It is fortunate that the nurse in attendance had sufficient strength to restrain the patient and forestall a suicide. After recovery, Park was able to have the patient successfully use a reed device originated by Gussenbauer in Germany as a means of restoring speech.

Contributions Beyond the Purely Surgical Realm

Park did considerable writing in areas that ranged well beyond the realm of surgery. A collection of his essays bears the title *The Evil Eye, Thanatology, and Other Essays.* In the section on thanatology (the study of the nature and causes of death), the author addresses the questions What is death? and When does death actually occur? Questions such as these had not been well studied in Park’s time, and he made a plea that there be more scientific inquiry into such matters. Park predicted the time when transplantation might become an active field, but in spite of his efforts, it was many years before commissions were set up to look into the definition of death in the context of organ donation.

Park had a strong interest in medical history and published a book on the subject in which he covered topics ranging from early Egyptian medicine up to events of the nineteenth century.

Conclusions

Roswell Park is credited with being one of the American surgeons who was influential in promulgating the Listerian principles, a vitally important step in bringing surgery to a reasonable level of safety. One can’t help but feel considerable sympathy for surgeons of Park’s day who were operating on hyperthyroid patients without a clear understanding of the pathophysiology of the disease. It is fascinating to visualize this particular stage in the slow upward gradient of human knowledge. One must admire individuals who have the capacity to rise high in their professions while at the same time being able to express themselves clearly in other fields, as Park did in the case of his non-medical essays.
References


Chapter 6

George Washington Crile, a Contributor to Head and Neck Surgery

by Donald P. Shedd, M.D., and Mark D. DeLacure, M.D.

Most doctors concerned with the care of patients with cancer of the head and neck are aware that someone named Crile was involved in early efforts to carry out radical neck dissection. It is of interest to carry our knowledge of the man a bit beyond this level.

Early Years

George Washington Crile (Fig. 6.1) was born to Michael and Margaret (Dietz) Crile in 1864 in the very small village of Chili, Ohio. His early life was that of a farm boy, and he went on from that beginning to become a teacher. Encouraged by exposure to a country doctor, he entered Wooster Medical School (later to become Western Reserve) in 1886. After graduation, following the pattern of many surgeons of his era, he studied in London, Paris, and Vienna.

In his early years of practice, he began to carry out animal experiments in an effort to clarify basic surgical questions. This effort continued throughout his surgical career and resulted in a number of significant contributions.

Family

In 1900, Crile married Grace McBride, who later played a major role in editing some of his publications, including a two-volume autobiographical work, which she completed after his death.1 They had four children, one of whom, George Jr. (1907–1992), also became a surgeon of note; another, Robert, published papers in comparative anatomy.
Honors and Memberships

Crile began to garner honors rather early in his career, receiving at the age of thirty-four the Nicholas Senn Prize for his research on surgery of the respiratory system. Numerous other awards followed over the years, including the Legion of Honor from France. He was one of the founders and later became president of the American College of Surgeons; he also was a founder of the American Society for Clinical Surgery. In addition to his many medical affiliations, Crile also was a member of the American Philosophical Society, an indication of his broad range of interests. He served his country in a military capacity in World War I.

Contributions in Head and Neck Surgery

Crile’s interest in head and neck surgery began as a result of his exposure to problems of the thyroid gland combined with his involvement in airway restoration for diphtheria patients. Some of his experimental work showed him that the use of topical cocaine and atropine could markedly diminish the adverse reflex effects of surgical manipulation of the trachea. He was called upon to deal with a large number of diphtheria victims, for whom establishment of an airway was essential and in whom the method used was peroral insertion of a gold tube. From these experiences he progressed to addressing the management of head and neck cancer patients. He recognized that removal of only the clinically involved neck nodes was not curative; this realization led him to develop the concept of the radical neck dissection. His 1906 paper on this topic is accompanied by drawings of great clarity (Figs. 6.2 and 6.3). Some of his early operations included not only neck dissection but also, at the same time, resection of the primary oral tumor. Crile advised elective node dissections for cancer of the lip; this practice was given up by later surgeons.

In dog experiments, Crile sought to determine whether it is possible to temporarily clamp both common carotid arteries to render neck surgery bloodless. Finding no adverse consequences, he applied this method in his early operations on head and neck cancer patients. He states in his autobiography: “The carotid clamp, making the vascular field bloodless, led to my working out an operation so radical that it was conservative”; i.e., the radical neck dissection. Crile carried out a number of operations in which temporary bilateral common carotid occlusion was utilized; however, for a number of reasons, the practice did not become part of standard surgical procedure.

In his early days of caring for patients with hyperthyroidism, Crile saw tragic results when subjects experienced thyroid storm in association
with attempts to remove the gland. He believed that the storm was related to an exaggerated fear response. This led him to develop the method of "stealing" the gland: The patient was given a "breathing treatment" each day for several days; then on one day, the patient would unknowingly receive a general anesthetic, making it possible for the patient to undergo operation without the severe fear reaction otherwise seen. This approach did reduce the incidence of hyperthyroid crisis, and the mortality rate was considerably diminished as a result.

**Crile’s Contributions in Other Fields of Medicine**

In a 1980 book by Dr. Peter English\(^5\) devoted to a study of Crile’s contribution to our understanding of the pathophysiology of shock, this interesting statement appears: “There is a sense of irony that the man who was so responsible for bringing about a physiological approach to surgical problems was so soon outstripped by the work on physiology of shock.” English is referring to the fact that Crile’s valuable early contributions laid the groundwork for subsequent studies of a more sophisticated nature that clarified the changes occurring in shock. Crile did important work in this field and was one of the earliest surgeons in the U.S. to appreciate the value of the sphygmomanometer.\(^6\) He also utilized a pneumatic pressure suit in an attempt to deal with the changes in distribution of blood during surgical operations, particularly in procedures wherein the head-up position was employed. This concept was later applied in aviation medicine.
Crile also did important early work on the utilization of blood transfusion.7

George Crile’s pioneering work on shock led to his coining a word that can still be found in medical dictionaries today: The term “anoci-association”8 refers to “the state of being freed from noci-association by cocaine blocking and relief from fear.”9 Crile was deeply interested in the role of the emotions—particularly fear—in surgical patients, going back to his experience with hyperthyroid crisis.

Activities Beyond the Purely Medical Sphere

Crile also had a lifelong interest in the relationship between the brain and the endocrine system, and he extended his studies of this matter to many species other than man. In his book Intelligence, Power, and Personality,10 he describes studies he undertook with Daniel Quiring, Ph.D., director of the Division of Anatomy of the Research Laboratories of the Cleveland Clinic Foundation. They went to a number of places, including Africa (Fig. 6.4), and catalogued the weight of heart, brain, thyroid, and adrenals in many species—a total of more than 3,700 animals. In addition, Crile wrote books on the German state philosophy11 and on his views concerning war and peace.12

Fig. 6.4. Photograph taken during African expedition showing Dr. Crile at right, with hand on elephant.
Later Life

In his mature years, Crile held important posts in a number of organizations. He faced some major challenges in his life, including an airplane crash in the Everglades, which he survived, and vision impairment due to glaucoma. By all accounts, he weathered his problems with fortitude and courage. His final trial was the occurrence of a bacterial endocarditis that proved fatal in 1943. The following quotation from Dr. E. Lower conveys some measure of the regard in which Crile was held:

George Crile had a quest and a vision that he pursued throughout his entire adult life with a devotion amounting almost to mystic fervor. This is the striking thing that distinguished him from other surgeons and that gave special meaning to his life. He was not content to make use of known truths, but was forever searching for the answer to “What is Life?” This was the stream into which his tremendous energies flowed, and all his activities and observations were purposeful and tributary to this.13

References


Today, when skin grafts are cut with various types of dermatomes, few surgeons remember the Blair knife (a long straight blade for cutting free-hand grafts) or the Blair-Brown suction retractor (used to lift, tighten, and flatten the skin ahead of the cut). There are pictures in older texts of grafts as long as 36 inches being cut by such methods. One of the names behind these items was Vilray Papin Blair, a very interesting surgeon whose career was described in detail in a 1956 paper by Jerome Webster.1

Background

Vilray Blair (Fig. 7.1) was born in 1871 in St. Louis, Missouri, where he also received his early education. In his early medical career, he had periods of uncertainty when he was not sure whether medicine was for him. He traveled extensively during his early life, writing about medical and other aspects of his travels. One of his earliest papers was on malarial and blackwater fever on the west coast of Africa.2

At the turn of the century he settled down in St. Louis and devoted himself to a career in surgery, a career that lasted more than fifty years and featured a number of contributions important to the growth of head and neck oncology. He authored four books, several of which underwent a number of editions.
Contributions in the Form of Books

Blair’s first book, published in 1906, was on the modeling of human bones in clay, a method for learning anatomy that had considerable value. His second book, published in 1912 with subsequent editions in 1914 and 1917, was on surgery and disease of the mouth and jaws. Blair’s third book, published first in 1923 with Robert Ivy as co-author, was on essentials of oral surgery. Ivy also co-authored the second and third editions; James Barrett Brown (1899–1971) joined Ivy as a co-author on the fourth and fifth editions. Ivy had a dental as well as surgical background and was professor of maxillofacial surgery at the Graduate School of Medicine at the University of Pennsylvania. Brown, who succeeded Blair as chief of plastic surgery at Barnes Hospital in St. Louis, was a major figure in the field for many years. Brown co-authored a book on neck dissection with McDowell.

Blair’s fourth book, co-authored with Sherwood Moore and Louis T. Byars, was on cancer of the face and mouth and covered diagnosis, treatment, and surgical repair. Moore was chief of radiology at Barnes Hospital, and Byars was a staff surgeon trained by Blair.

In addition to this impressive output of books, Blair published many papers in medical periodicals, including one with the interesting title “‘Hits, Strikes, and Outs’ in the Use of Pedicle Flaps for Nasal Restoration or Correction,” co-authored with Byars.

Evidence of his level of concern for the patient is found in a paper he wrote on psychic reactions to plastic surgery of the face, head, and neck in which he states:

I was reared in the most orthodox medical surroundings, with an unquestioning belief in the correctness of the underlying ethics and rules of practice of the profession. As a result, I put aside more opportunities to prostitute the art than I yielded to, and, in the light of later observations, I now feel that I neglected more opportunities to do good than otherwise. It took more than a few patients discontented after what seemed to me a rather satisfactory restoration, and a few real or attempted suicides after a supposedly satisfactory explanation as to why the sufferers should forget his trouble to make me, the satisfied surgeon, realize that there might be more angles to this work than were contained in my philosophy.

The Book on Cancer of the Face and Mouth

Published in 1941 when the author was seventy years old, Blair’s Cancer of the Face and Mouth deserves attention because it was one of the earliest American treatises on the subject and because it summated the author’s twenty years of experience with approximately 1,500 patients.
The book is dedicated to Evarts Graham, chief of surgery at Washington University in St. Louis, a man who became famous for performing the first successful pneumonectomy for cancer and for the discovery and introduction of cholecystography. Graham was one of the most influential surgeons in American history. The book's introduction is by J. M. T. Finney, an eminent Baltimore surgeon who was the first president of the American College of Surgeons. The book includes sections on general considerations, surgical principles, node metastases, anesthesia, radiation by Moore, and consideration of the various subsites. The sites covered include all of the head and neck except the larynx.

The author demonstrates a good knowledge of the natural history of oral cancer, recognizing the fact that precursor lesions are often present for a long time before the existence of a cancer. In 1941 Blair stated what is still true today; that is, that although a high potential for early diagnosis exists, the majority of patients do not arrive at a point of definitive treatment until the lesion is quite advanced.

The section on statistics is a report of the experience of one of Blair's associates, Dr. Ellis Fischel, with 780 patients between 1913 and 1936, with five-year follow-up. Of the group, 406 had tumors of the mouth, 300 had tumors of the skin, and the remainder included patients with melanomas and tumors of the orbit, antrum, salivary glands, or nasopharynx. In the entire group, 159 neck dissections were performed. An indication of the results in this era is to be found in the report on cancer of the tongue, floor of mouth, fauces, and pharynx, where among 91 patients there was a 20.9 percent five-year survival. The survival rate for neck dissection in patients with positive nodes was 29 percent. The mortality rate was 21.4 percent for patients in whom neck dissection and resection of an oral primary tumor were carried out at the same sitting.

The author was diligent in his efforts to document photographically the lesions of his patients; the book has many good black-and-white photographs of lesions. In addition to these, Blair utilized well the services of an artist, and the final 200 pages of the book consists of drawings of the technical details of the ablative and reconstructive aspects of his operations (Figs. 7.2 and 7.3).

The book includes a section on care of the patient in whom inoperable recurrence is present: "Much can be done to keep up the patient's morale if he is made to feel that his physician is a kind and sympathetic friend who has not lost all interest in him after the operation," Blair states.

In the era when this book was written, there was considerable concern about dealing with the infection that accompanies tumors. Blair advocated use of the actual cautery for control of local infection before moving to definitive treatment. He would delay major operation if a
furuncle was present on any part of the body because he considered this to be evidence of a diminished resistance to infection. It is of interest to note that Blair’s experience led him to a preference for interstitial radiation as the best method for treatment for tongue and floor-of-mouth tumors. Surgical treatment of the primary tumor was reserved for specific indications, such as failure of radiation control. He advocated carrying out neck dissection at the same sitting as the radon implantation.

In managing cancer of the pharynx, Blair favored electrocautery or radon seed implantation for most patients, although he was aware of the different approach being utilized by Trotter in England, who was carrying out extirpation of pharyngeal tumors via an external route.15

Other Achievements

Blair’s work led him to be chosen by Will Mayo, surgeon general of the U.S. Army, to head the army’s oral and plastic surgery section. Blair therefore became chief consultant in maxillofacial surgery with the American forces in World War I in Europe. One of Blair’s assistants was Earl Padgett, who later developed the dermatome.
Even though early in his career Blair preferred to be called a general surgeon, he was a major factor in defining plastic surgery as a specialty. He convened the group that eventually evolved into the American Board of Plastic Surgery, of which he was the first secretary. He also was certified by the American Board of Otolaryngology. Graham describes Blair as "one of the most outstanding and colorful figures in American surgery ... he, more than anyone else, created the specialty of plastic surgery."^{16}

Blair is credited with being a major figure in promulgating the concept of improving the probability of survival of long pedicle flaps by delays, by raising the flap and suturing it back in its bed.

Blair and his associate J. B. Brown are credited with popularizing the practice of using split-thickness skin grafts to cover large granulating surfaces,^{17} a significant contribution to improving care of the burn patient.

Conclusions

Blair's therapeutic skills were extended to his own wife, who suffered a fracture of the hip and was an invalid for many years. He provided her with devoted care during that difficult time period.

The growth of knowledge in head and neck oncology has come from a number of disciplines, among which plastic surgery has been an important contributor. Blair, more than any other plastic surgeon of his time, demonstrates the contributions that a skilled reconstructive surgeon can bring to the management of oncologic problems. He chose to be a surgeon who carried out not only the ablative aspects of care of the patient, but the reparative portions, as well.

References


Chapter 8
Wilfred Trotter, Head and Neck Surgeon and Sociologist

ames fly by as we study head and neck surgical oncology, and we may or may not find a moment to pause and wonder, “Who was this Dr. Blank?” Because everything we do today is built upon the work of our surgical ancestors, we should know and honor these doctors.

For present-day clinicians, the name Trotter should ring some kind of bell, whether or not one is clear on exactly who he was. Actually, Trotter was not only a surgeon of considerable stature who made significant contributions to head and neck surgery, but also a very interesting man whose contributions, as it turns out, were not limited to the field of medicine. Reviews of his accomplishments have been provided in the past by Malt and by Whicker and Devine.

Background

Wilfred Lewis Batten Trotter (Fig. 8.1) was born in Coleford, England, in 1872, the son of a businessman. In 1910 he married Elizabeth May Jones, sister of Ernest Jones, author of a well-known three-volume work on Sigmund Freud. Their son, Robert Wilfred Trotter, did good work in the field of endocrinology. Wilfred L. B. Trotter became a highly respected surgeon, researcher, and teacher at the University College Hospital in London. He died in 1939. A 1973 lecture by Dr. Pilcher provided considerable detail on the life of this versatile man.

Fig. 8.1. Portrait of W. L. B. Trotter.
Honors

A number of honors came to Trotter in his lifetime, among them an honorary LL.D. from Edinburgh and a D.Sc. from Liverpool. In addition, because of his high reputation, many important people consulted him about their medical problems. For example, when King George V suffered an empyema, Trotter was the one selected to care for him. (Drainage was carried out and a good recovery ensued.) Likewise, it was Trotter who was consulted on Sigmund Freud’s long battle with oral cancer. In 1931 Trotter was one of only two surgeon members of the Royal Society, a significant measure of the level of prestige he achieved. Indeed, in the minds of many he was the foremost British surgeon of his era, a great teacher, and a fine clinician.

Contributions in Head and Neck Surgery

Trotter devoted considerable attention to cancer of the pharynx; his papers of 1926 and 1931 were considered the definitive works on the subject. He recognized a somewhat different pattern of cancer of the pharynx in women as opposed to men: In women the disease usually occurred in a lower, post-cricoid location (Fig. 8.2), whereas in men the cancers were located at a higher position (Fig. 8.3).

Fig. 8.2. Trotter’s depiction of the usual site of hypopharyngeal cancer in women.
Trotter described the lateral transthyroid pharyngotomy, an approach he used in a number of instances to resect malignant tumors (Fig. 8.4). His contribution was to combine two previously described procedures—the superior lateral pharyngotomy and the inferior lateral pharyngotomy—into an approach he logically dubbed the combined lateral pharyngotomy. Part of his exposure was the division of the mandible near the angle to improve the access to the upper part of the hypopharynx. Depending upon the size of the defect, he would either carry out primary closure or leave a temporary fistula to be closed at a second procedure (Figs. 8.5 and 8.6).

Trotter is credited with being the originator of the median translingual pharyngotomy, an approach to the posterior tongue and the pharynx; this approach was later renamed the median labiomandibular glossotomy. Because infection was such a problem in his era, Trotter felt that the presence of teeth, as a potential source of infection, was a contraindication to pharyngeal surgery; therefore, he would remove teeth and wait two weeks for healing of the gums before proceeding with the cancer operation.

A syndrome that bears Trotter’s name refers to the triad of unilateral deafness, palatal weakness, and pain in the trigeminal distribution—manifestations of a cancer of the nasopharynx. (In some references to Trotter’s syndrome, lumps in the neck, rather than local pain, is listed as the third component.) References to Trotter’s syndrome have appeared as recently
Fig. 8.4. Diagram of Trotter's resection of the ala of the thyroid cartilage and the greater cornu of the hyoid bone as part of his combined lateral pharyngotomy approach to tumors.

Fig. 8.5. Diagram of the first stage of pharyngeal reconstruction for anterior wall tumors by use of a cervical flap.
as 1986, when an article by Flynn and Eisenberg\textsuperscript{7} described the CAT scan findings associated with the syndrome in a patient with a tumor of the nasopharynx.

Trotter was one of the first English surgeons to treat Graves' disease by surgical means, a subject on which he published in 1912.

**Contributions in Other Areas of Medicine**

In the field of neurology, Trotter did important work with a colleague on cutaneous innervation by self-experimentation. After sectioning various sensory nerves in each other, they studied carefully the recovery of sensation. Their work did much to establish the concept of protopathic and epicritical sensation. In neurosurgery, Trotter's writings on subdural hematoma were considered the standard of reference in his time.\textsuperscript{8}

Trotter wrote and lectured widely on general medical subjects, as well as those pertaining specifically to surgery. A cursory review of the essay titles in his *Collected Papers of Wilfred Trotter*\textsuperscript{9} gives some indication of the breadth of his interests: "Emergency," "The Commemoration of Great Men," "A Landmark in Modern Neurology," "The Insulation of the Nervous System," "The Functions of the Human Skull," "Art and Science in Medicine," "Observation and Experiment and Their Use in the
Contributions Outside of Medicine

Wilfred Trotter had a deep interest in sociology and psychology, and one of his contributions here was his description, in a 1909 paper, of the herd instinct in man. This paper attracted wide interest, interest that grew even wider when the concept appeared as part of a book on the subject in 1916. The concept was that the behavior of a man is always under heavy influence from the social unit of which he is a part. The relevance to pre–World War I Germany is clear.

In the preface to his book, Trotter states:

If war is becoming, as it obviously is, daily more and more completely a contest of moral forces, some really deep understanding of the nature and sources of national morale must be at least as important a source of strength as the technical knowledge of the military engineer and the maker of cannon.

Reading this passage, one can’t help but think of the events of the Battle of Britain in World War II. Trotter’s work in biosociology and its application to the phenomenon of war was still being cited as recently as 1986, in a review by Holdstock, who regarded Trotter as a pioneer in the field.

Trotter was known also for his sense of humor. On one occasion he is said to have quipped, in response to a colleague’s protracted discourse, “And what, pray, is the upshot of this verbiage?”

Conclusions

Rare is the person whose talents are of sufficient depth and breadth that he is able to make significant contributions in more than one area of special expertise. Such a man was Wilfred Trotter. He figures heavily in the history of head and neck surgery. Not only was he considered the foremost British surgeon of his time, but he managed in addition to make a mark in the field of sociology, where his description of the herd instinct in man is still considered a landmark contribution.

It was in the context of his study of the herd instinct in man that Trotter observed, “The probability is very great that, after all, man will prove but one more of nature’s failures.” Whether this quotation represents pessimism or realism is a fascinating question relating to the life of this remarkable individual.
References


Chapter 9

Hayes Martin, Father Figure of Modern Head and Neck Cancer Surgery

Dr. Hayes Martin of Memorial Hospital, New York City, is regarded by many as the father of modern head and neck cancer surgery. A definitive biographical presentation on him was delivered as a Presidential Address before the Society of Head and Neck Surgeons in 1989 by then-president Dr. James Helsper. The material was published in the American Journal of Surgery\(^1\); what follows is largely based on Helsper’s findings.

Background

Hayes Martin (Fig. 9.1) was born in 1892 in Dayton, Iowa, and grew up in rural surroundings. After being orphaned at an early age, he was raised by a relative. He attended public school in Dayton and then attended the University of Iowa for both his undergraduate and his medical education, receiving his M.D. in 1917.

Enlistment in the U.S. Navy led to his assignment to Colorado and then to the Great Lakes Naval Hospital, following which he was sent to a navy air station in France. Upon his return to the U.S. at the end of World War I, Martin served internships at the Poly Clinic and Memorial Hospital in New York City and subsequently completed a residency at Bellevue Hospital under Dr. John Hartwell.

Martin was then given a staff position at Memorial Hospital, where he continued to work for the remainder of his career following his appointment as chief of the head and neck service. His work initially involved heavy dependence upon irradiation in the treatment of tumors, with a gradual shift to surgery.
Research and Writings

In an article published in 1953, Martin described how, up until the late 1930s, the development of radical surgery for cancer of the head and neck lagged behind that of cancer surgery for other sites because of mortality and morbidity considerations. He also addressed the issue of the effect of age upon surgical mortality for head and neck cancer patients. His statistical studies showed that reasonable mortality rates could be achieved in older patients provided that the supportive care was sufficiently diligent.

In subsequent years he published many articles on head and neck oncology; particularly noteworthy was his very comprehensive paper, co-authored with DelValle, Ehrlich, and Cahan, on neck dissection. Papers such as this soon established Martin as the reigning authority on treatment of neoplastic disease of the head and neck and led to trainees from many countries coming to spend time on his service to study his diagnostic and therapeutic approaches.

Among his contributions was the establishment of aspiration biopsy as a valid method of tumor diagnosis. A very major contribution was his book on head and neck cancer surgery, a volume that became an invaluable resource for many doctors involved in the care of this category of disease. The book has superb drawings of operative techniques for the various subsites in the head and neck (Fig. 9.2).

In his book, Martin notes that composite operations for removal of primary tumors of the mouth combined with mandibular resection and neck dissection came to be referred to by the resident staff as "commando" operations, based on reference to commando raids on Dieppe in 1942. This terminology became part of standard parlance at Memorial Hospital.

Martin’s book is of interest also in that it documents the experience of a surgeon whose career witnessed the arrival of sulfonamides and penicillin upon the surgical scene, and the dramatic effects that resulted. Of importance in Martin’s impact upon oncology is the fact that he was board certified in three disciplines: general surgery, plastic surgery, and radiotherapy.

Speech Rehabilitation

Martin became very interested in the problem of speech rehabilitation after laryngectomy. He wrote a comprehensive article on the subject in 1963 in which he provides an in-depth review of esophageal speech and use of the artificial larynx; he also presents a detailed program for achieving early post-operative speech rehabilitation. In commenting on some of the problems of esophageal speech, he mentions the matter of
Fig. 9.2. Example of the high-quality drawings in Martin’s book on head and neck tumors.

aerophagia, as the speaker takes air into the esophagus in preparation for speech. The air taken in does not all find its way out through the mouth in the form of speech; some of the air proceeds down the gastrointestinal tract and causes varying degrees of borborygmus, intestinal rumbling that can on occasion be loud enough to create embarrassment for the laryngectomee in social situations. Martin quotes the following limerick as illustrative of the problem:

I sat by the Duchess at tea.  
She was haughty and proud as can be.  
But her noises abdominal  
Were simply phenomenal,  
And everyone thought it was me.
Conclusions

A major impact of the life of Hayes Martin was his founding in 1953, with Dr. Grant Ward, of the Society of Head and Neck Surgeons, an organization that grew to include many of the surgeons in the field. Annual meetings were held, with publication of the presentations once each year in the *American Journal of Surgery*. These papers became a valuable resource for those seeking information on the details of head and neck oncology.

In 1957, Martin suffered a small stroke; then in 1971, a major stroke left him with aphasia and hemiplegia, confined to a wheelchair until his death in 1977. Dr. Hayes Martin was unquestionably one of the primary contributors to the field of head and neck oncology throughout the world.

References

Chapter 10

Contributions of Grant E. Ward to Head and Neck Oncology

by Donald P. Shedd, M.D., Mark D. DeLacure, M.D., and
John R. Saunders, M.D.

The book *Tumors of the Head and Neck,* by Grant E. Ward and James W. Hendrick, was an outstanding contribution to our knowledge of head and neck oncology. Far more than just another atlas of surgical technique, this book is a comprehensive and very well-illustrated treatise covering the natural history of cancer above the clavicles. Ward was an impressive individual, and it is worthwhile to look in detail at his professional life.

**Background**

Grant Eben Ward (Fig. 10.1) was born in Lorain, Ohio, in 1896, the son of Fletcher D. Ward and Harriet W. Ward. His father was dean of a department at Baldwin College in Berea. One brother, Ralph, became a Methodist bishop and served in Hong Kong, and another brother, Lucius, became a professor of chemistry in Ohio. Grant Ward married Lillian Anderson Hersperger, and they had two daughters.

**Education**

Ward graduated from Baldwin College in 1917 and went on to study medicine at Johns Hopkins, graduating in 1921. He served a residency at the same institution and then entered into practice with Dr. Howard A. Kelly, one of the “Big Four” of Hopkins. Their practice utilized radiation at the hospital, run by Kelly. Ward developed an interest in electrosurgery and authored a book with Kelly on this subject in 1932."
Appointments

Ward had a faculty appointment at Johns Hopkins from 1927 until his death in 1958. The tumor clinic where he worked was later named after him. He also served on the faculty of the University of Maryland from 1930 until 1951 and was an associate professor in the Baltimore Dental College. He became a fellow of the American College of Surgery in 1928 and was certified by the American Board of Surgery in 1939.

Honors

Ward was cited by the Baltimore City Medical Society for his inspiring service to medicine; he also received the Baltimore Goodwill Industries Award for his outstanding service. He was vice president of the Maryland State Medical Society and president of the Baltimore City Medical Society.

Ward’s contributions in head and neck surgery led him to work with Dr. Hayes Martin in founding the Society of Head and Neck Surgeons around 1953. Ward was elected to the presidency of the organization in 1957; however, his death in 1958 from rectal cancer prevented him from presiding over that year’s meeting.

Medical Problems

Grant Ward had more than his share of medical problems. He suffered from ulcerative colitis and underwent an ileostomy in 1940. He was plagued by repeated bouts of thrombophlebitis of the leg. In 1942 he developed a benign spinal-cord tumor, the removal of which left him with severe weakness in the upper portion of his right (dominant) arm, though he retained use of his fingers. With disabilities like these, a lesser man might have given up the practice of surgery, but Ward worked with engineers to develop a supportive device that enabled him to continue to operate and persevered to achieve skill in the use of his non-dominant left hand (Fig. 10.2). He was also able to enjoy gardening and swimming, despite his handicaps.

Personal Issue

Ward attributed his triumph over medical adversity to his religious faith (he was a devout Christian), to common sense, and to his understanding of the power and potential of medical science. He is said to have seen no disharmony between science and religion. “I am by virtue of my training a very religious person,” he once explained, adding, “You’ve got to have faith or you don’t get anywhere in this world.”

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Fig. 10.2. Orthotic device worn by Dr. Ward after operation on his spinal cord.

Contributions

During his early years of practice with Howard Kelly, Ward became very interested in electrosurgery and published a number of papers on clinical and experimental aspects of this modality. His use of electrocoagulation as a means of hemostasis led some to refer to this approach as the Ward method. His contributions had a profound effect on surgery in general and on neurosurgery in particular. There is an early paper by Harvey Cushing and W. T. Bovie, published in 1928, on the use of electrosurgery as an aid in the removal of intracranial tumors. Ward’s numerous papers on electrical methods covered a wide anatomical range, including skin, pelvis, abdomen, penis, and breast.

Kelly and Ward state in the preface of their book on electrosurgery:

Novel as is the realm and indeterminate, electrosurgery opens a vista, we believe, designed in no small measure to replace scalpel, ligature, and hand contact with wounds, as well as notably to pare down the number of those listed as the “inoperables” by skilled surgeons.
The extensive experience that Ward acquired in care of head and neck cancer patients is evident in the book he co-authored with Hendrick in 1950, *Tumors of the Head and Neck* (Fig. 10.3). The book has many photographs, as well as excellent drawings. Of all the books that have been published in head and neck oncology over the years, this one stands out for its comprehensive coverage of a wide range of aspects of the field. The foreword was written by the great Hopkins surgeon Alfred Blalock, who later composed Ward's obituary for the *Maryland State Medical Society Journal*.  

There is a long and detailed section on embryology of the head and neck. The book approaches head and neck oncology by subdivision into the different anatomic sites within the region, and it contains good descriptions of benign and pre-malignant conditions of each site. Ward also presents his views on the integration of radiation and surgery in treatment.  

There is good coverage of diagnosis, along with, for example, a description of the technique of sialography. The authors include chapters on lymphoma of the area, as well as on primary tumors found in the neck. In some instances, the authors called upon colleagues to deal with certain areas, such as the section on tumors of the eye, written by C. Iliff of the Johns Hopkins Ophthalmology Department, and the rather short section on reconstructive surgery, written by E. Hanrahan, a Hopkins plastic surgeon. Also included is a section on mandibular repair by Milton Edgerton, who was at that time an instructor at the school; he later became well known for his work in plastic surgery and in head and neck oncology.  

Ward was one of the first in the modern era to describe the concept of the composite resection of a primary oral tumor in continuity with neck dissection, as well as the pull-through operation. Early in the present century George Crile had referred to removal of oral primary tumors in conjunction with radical neck dissection; however, he had provided no specific details. Ward did provide details—with excellent illustrations—both in his book and in an article he co-authored with J. Robben in 1951.  

**Conclusions**

It is difficult to bring to mind a surgeon who labored with handicaps as great as those of Grant Ward. It is hard to imagine embarking on long operations with an ileostomy bag, elastic stockings for phlebitis, and a complex orthotic device, but this man had the fortitude to do so; at the same time, he earned the love and admiration of the surgical residents. Once, when asked at the end of an eight-hour operation how he could withstand such an ordeal, Ward replied, "I do not allow myself to think about it."
DIAGNOSIS & TREATMENT
OF
TUMORS
OF THE
HEAD AND NECK
(Not including the Central Nervous System)

By
GRANT E. WARD, M.D., D.Sc., F.A.C.S.
and
JAMES W. HENDRICK, M.D., M.S.

From the Departments of Surgery of the School of Medicine University of Maryland, and the Johns Hopkins University School of Medicine, and the Oncology Clinic of the University Hospital and the Tumor Clinic of the Johns Hopkins Hospital

BALTIMORE
THE WILLIAMS & WILKINS COMPANY
1950

Fig. 10.3. Title page of Tumors of the Head and Neck, by Ward and Hendrick.
One must conclude that Ward, while not the most famous figure in American surgery, was certainly a man who merits high respect for what he was able to achieve.

References

Chapter 11

John Joseph Conley, a Contemporary Head and Neck Surgeon

The high regard in which John Joseph Conley is held by his colleagues is evidenced by his selection in 1959 as the first president of the American Society for Head and Neck Surgery. In 1974 he was president of the American Academy of Ophthalmology and Otolaryngology.

Personal and Professional History

John Joseph Conley (Fig. 11.1) was born in 1912 in Carnegie, Pennsylvania. His medical education took place at the University of Pittsburgh; he graduated in 1937. After an internship in Pittsburgh, he was a resident at Kings County Hospital in Brooklyn. He changed his focus from internal medicine to otolaryngology. Service in World War II was followed by work with the Pack Medical Group in New York City.

The large clinical volume at the Pack Medical Group gave Conley a sizable level of patient experience, and his reputation grew rapidly. His skill as a teacher drew many observers to his operating room. Over the course of his career, he published more than 300 articles, as well as eleven books. His comprehensive review of the history of head and neck surgery, co-authored with Vonfraenkel,\(^1\) covers events dating back to the seventeenth century.

\(^1\) See the reference for more details.
Wide-Ranging Contributions

The subjects of his books give some indication of his areas of special interest: These include complications of head and neck surgery, salivary glands, facial paralysis, and melanomas of the head and neck.

His numerous interests beyond medicine included music (clarinet, saxophone, and recorder), poetry, art (Fig. 11.2), and ethical issues.

Conley is said to have filled thirteen volumes with his poetry on a wide range of subjects. Several examples are to be found in the special recognition issue of *Laryngoscope*, which contains tributes to Conley by a number of American and European clinicians; there are samples there of his painting skill, as well.

In the realm of ethics, he established a foundation that awards an annual prize for the best contribution in the field by a medical student.

Conclusions

It is clear that Conley was a man of unusual breadth, a contender for the title of Renaissance Man. All surgical oncologists owe him a large debt for what he has taught them. Dr. John J. Conley died on Sept. 21, 1999. A memorial service was held at the New York Academy of Medicine on Nov. 19, 1999.

Fig. 11.2. Examples of Dr. Conley’s artwork. Originals were in color. (Reproduced from the John Conley Special Issue of Recognition of the journal *Laryngoscope* with permission of the author and the publisher.)
References


Chapter 12
A Tribute to Joseph H. Ogura

Dr. Joseph Hirosuke Ogura was a major contributor to the field of head and neck oncology.

Personal and Professional History

Ogura (Fig. 12.1) was born in San Francisco in 1915. After receiving his degree from the University of California at Berkeley in 1937, he attended medical school at the University of California at San Francisco, graduating in 1941. During World War II, there were problems for Japanese-Americans on the West Coast. Ogura secured a residency in pathology and internal medicine at the University of Cincinnati, then moved to a residency in otolaryngology at Barnes Hospital in St. Louis, which he completed in 1948. He joined the faculty of Washington University, reaching the rank of full professor in 1960. He was chair of the otolaryngology department from 1966 until 1982.

Accomplishments

Ogura developed a strong interest in head and neck oncology, particularly cancer of the larynx and pharynx. He felt that there should be ways to remove certain tumors in this region without sacrificing vocal function, so he proceeded to study this question and to develop operations that would achieve such a goal. While his efforts in this regard were initially met with skepticism by colleagues in his profession, gradually Ogura was able to show, by careful documentation, that one could indeed remove a good number of larynx and pharynx cancers without losing vocal cord.
function. Over the course of his career, Ogura published nearly 300 articles and contributed chapters to twenty textbooks.

As his ideas became accepted, more and more patients found their way to him for partial laryngeal surgery. In addition, as his concepts proved true, surgeons, too, came to him to study his approaches to surgical care.

Ogura developed a strong training program in otolaryngology that attracted trainees from many areas in the U.S. and beyond. A number of his former residents rose to leadership positions in the field.

Honors

As his efforts gained recognition, Ogura was the recipient of numerous honors, including an Award of Merit from the American Academy of Ophthalmology and Otolaryngology, a Bronze Medal from the University of Helsinki, a Semon Medal from the University of London, medals from Yugoslavia and India, and the so-called triple crown of otolaryngology—the DeRoaldes Gold Medal, the Casselberry Award, and the James Newcomb award.

Ogura was a founding member and president of the American Society for Head and Neck Surgery, as well as president of both the American Laryngological Society and the Triological Society. He served on the American Board of Otolaryngology and edited the journal *Laryngoscope*. He was appointed to the National Cancer Advisory Board by the President of the United States.

Conclusion

Joseph Ogura died in 1983. He was a man who faced considerable obstacles yet had the perseverance and ingenuity to overcome those barriers. His work has left a lasting impression on the practice of head and neck surgical oncology, particularly in the realm of voice preservation in surgical treatment of tumors of the larynx and pharynx.

References


Chapter 13

Biographical Note on Vahram Y. Bakamjian, M.D.

It is of interest to note that Dr. Vahram Bakamjian’s father, who was a barber’s apprentice, decided at age eighteen to seek an education. Accordingly, he attended school—with children much younger than himself—while he continued to practice part time as a barber in order to feed his family. The father, who eventually obtained a college degree, fled from Turkey to Syria to escape the Turkish genocide of Armenians.

Background

Vahram Y. Bakamjian (Fig. 13.1) was born in 1918 in Aleppo, Syria’s second-largest city, close to the Turkish border. Syria had been freed from Ottoman rule by the occupying allied forces. The name Aleppo—from the Arabic word “halab,” meaning milk—refers to the legend that the Biblical Abraham milked his herd there.

When Bakamjian was eighteen months old the family moved to Lebanon, where his father taught in orphanages established for victims of the Turkish genocide, first in one sponsored by the American Near East Relief organization, and later in one run by a British Friends of Armenia organization.

Bakamjian’s elementary education was in Lebanon. He went on to the American University of Beirut, where he spent one year in the French component of the school and two years in pharmacy before switching to the school of medicine. His school athletic activities included running, basketball, and soccer. Bakamjian received his B.S. in 1940 and his M.D. in 1945.

In 1947 he married Rose Moodyan, from Iran. They had three daughters, all of whom obtained advanced degrees (one in music, one in public health, and one in science).
After medical school, Bakamjian stayed on at the American University of Beirut and completed a surgical residency and a two-year fellowship. He also served as director of the blood bank for a year.

In 1951 he came to the United States for an ENT residency at Columbia Physicians and Surgeons, followed by two years of plastic surgery training and a two-year head and neck fellowship. Bakamjian was recruited to Roswell Park Memorial Institute (now Roswell Park Cancer Institute) in 1956 to work with F. Stanley Hofmeister in the care of head and neck cancer patients.

Contributions

The head and neck literature from 1960 on has many articles by Bakamjian that attest to his innovative spirit as a plastic surgeon. He had the unusual quality of being both a skilled ablative surgeon and an imaginative reconstructive surgeon. One of his most important contributions was the origination of the deltopectoral flap, which was the workhorse of head and neck reconstruction for a number of years.

From the 1950s through the 1990s, Bakamjian’s work attracted a number of trainees from various parts of the world. His achievements earned him the Special Recognition Award of the Society of Head and Neck Surgeons; he was also made an honorary fellow of the Association of Plastic Surgeons (U.S.) and the Japanese Society of Plastic and Reconstructive Surgery. After a long and distinguished career, Bakamjian retired from Roswell Park Cancer Institute in 1996.

References

Section II

Famous People with Head and Neck Cancer
Introduction

There are a number of famous people who have suffered head and neck cancer, including Ulysses S. Grant, Grover Cleveland, and Sigmund Freud. This section describes three individuals whose illnesses are representative of the course of the disease.
Chapter 14

Sammy Davis Jr. (1925–1990)

Sammy Davis Jr. was born in 1925 in Harlem. An African-American entertainer who began his stage career at the age of four under the guidance of his father, he was a talented singer, dancer, and actor who performed in many parts of the world during his sixty-year career. When he reached his full growth, his height was 5’4” and his weight was 110 pounds (Fig. 14.1).

Davis had a long friendship with the group known as the “rat pack,” which included Dean Martin, Frank Sinatra, Joey Bishop, and Peter Lawford. Sinatra called Davis “Smokey” because of the latter’s heavy level of tobacco use.

Davis was married three times. The first marriage lasted only a few months; the second, in 1960, was to the Swedish actress May Britt; and the third, to Altovise in 1970, lasted until Sammy’s death. In terms of religious affiliation, he was a convert to Judaism because it answered his spiritual needs.

Davis was a hard-living person who drove himself relentlessly. His fast-paced lifestyle included significant use of alcohol, tobacco, and cocaine. Although he was able to give up cocaine use, it is estimated that he smoked at least a pack and a half of cigarettes every day for fifty years. One indicator of the Davis lifestyle is the fact that there was a time when he owned fourteen automobiles.

Fig. 14.1. Photograph of Sammy Davis Jr. (Courtesy of the American Academy of Motion Picture Arts and Sciences.)
Davis had more than his share of medical problems. He lost one eye as a result of an automobile accident in 1954. He had two hip replacements. He developed an enlarged liver and had to reduce his drinking habits. In 1989, he developed a throat cancer for which he received radiation treatment, but this failed to control the tumor and, after an eight-month illness, he died at his home in Beverly Hills in 1990.\(^5\) His funeral was attended by hundreds of admirers.

Sammy Davis Jr. is a classic example of a person whose lifestyle leads to major medical problems—in this case, a fatal one. His liver disorder was almost certainly related to his alcohol consumption, and his throat cancer can be presumed to be the result of his tobacco (and possibly alcohol) use. It is difficult to diverge from the lifestyles of one’s confrères; in Davis’s milieu, the pattern was two-fisted drinking and smoking. This lifestyle cost him his life.

References


George Herman Ruth, better known as Babe Ruth (Fig. 15.1), was a baseball hero also known as the “Sultan of Swat” who set a record in 1927 for number of home runs hit in a single season that was not surpassed until 1974. Born in 1895, he was truly idolized during his lifetime and afterward. Robert Considine helped him to write an autobiography, The Babe Ruth Story; a film biography was also produced. Babe Ruth smoked heavily and chewed tobacco, as well.¹

Around the age of fifty, Ruth began to experience hoarseness and headaches, and a large tumor was found in the left neck. An operation was carried out, but complete removal was not possible. The neck mass was found to be metastatic squamous cell cancer. There was a primary cancer in the nasopharynx, for which radiation therapy was administered. As the disease progressed, he suffered great pain and required morphine to manage it. There is a fascinating account by Bikhazi et al. of the fact that Ruth was one of the earliest recipients of experimental chemotherapy. He had a significant favorable response to teropterin, with pain relief and recovery of lost weight, but the response was of short duration.²

Despite his severe disability, he bravely carried on with speaking engagements and other activities until very near the end. Babe Ruth died of his cancer in August of 1948 at the age of fifty-two, a great loss to the world of sports.³ Testimony to his heroic stature is found in the fact that some 75,000 people filed by his coffin at Yankee Stadium.
References


Chapter 16

Crown Prince Friedrich Wilhelm of Prussia (1831–1888)

In 1887, at the age of fifty-six, Friedrich, Crown Prince of Prussia (Fig. 16.1), developed hoarseness and was seen by various specialists in Germany and then by Morrell McKenzie, a leading expert from England. The Crown Prince was known to be a heavy pipe smoker.¹ His mother, Queen Victoria of England, was influential in having the British doctor called in. An article by Lucente provides details of the royal illness.²

Early biopsies were taken, but they were inconclusive with respect to cancer. Virchow read the slides. Various local measures were used to treat the cordal lesion, which, however, continued to progress. The public followed with great interest the course of the illness of this very popular person.

Eventually, the continued growth led to the need for a tracheostomy, which was performed in January of 1888. Friedrich’s father, Wilhelm I, died in March of 1888; after his father’s death, Friedrich reigned for only ninety-nine days. His death occurred in June of 1888.

The German doctors accused McKenzie of having mismanaged the patient, and McKenzie retaliated by publishing a book stating his side of the affair. There were bitter feelings on both sides of the channel.

Friedrich’s brother, Wilhelm II, who was considered more militant than Friedrich, succeeded him. The opinion has often been expressed that this change in leadership in Germany was a factor in bringing about World War I.
References


Section III

Additional Elements
Chapter 17

Role of the Two Head and Neck Societies

As interest in major surgery of the head and neck area grew, participants came together under the leadership of Hayes Martin and Grant Ward to found the Society of Head and Neck Surgeons (SHNS) in 1954. Members of the SHNS were primarily general and plastic surgeons. A second organization, the American Society for Head and Neck Surgery (ASHNS), was formed and had its first meeting in 1959. Members of the ASHNS were primarily otolaryngologists. The papers of the annual meetings of the two organizations were published in surgical periodicals, constituting a useful educational resource.

The two organizations began to hold periodic joint meetings and later formed an important committee, the Joint Council on Training in Head and Neck Oncologic Surgery. This group, under the leadership of John Loré, established useful standards for education of trainees and reviewed the programs of various institutions for approval of their educational offerings.

The relationship between the two organizations was not always friendly, which is not surprising given that they were competing for the same pool of patients. The joint meetings were valuable, however, and eventually the two groups combined to offer periodic international head and neck conferences that attracted a number of visitors from overseas. The proceedings of each conference were published in book form, and these books remain a valuable resource for workers in the field today.

Over the years, consideration was periodically given to amalgamation of the two societies; however, for a number of reasons, this did not come to pass until 1998, when the two societies merged to form the American Head and Neck Society. As of this writing, the society is planning for another international meeting to be held in the year 2000.
Chapter 18
A Look to the Future

During the period covered by this book, there were very major advances in radiation therapy that contributed heavily to improved survival and lessened morbidity. Also, the field of chemotherapy of head and neck cancer made significant advances, and eventually there followed efforts to combine these two treatment modalities with surgery, with resultant benefits to patients. At the time of this writing, one of the major foci of research is into such combining of modalities in an effort to improve survivorship, reduce morbidity, and improve the quality of survival.

One other area that made for major progress was the improvement in diagnostic imaging from such advances as the CAT scan and the MRI. Greater diagnostic accuracy continues to lead to greater precision in treatment.

As additional sophisticated testing methods are developed, there is real potential for greater precision in separating the more aggressive tumors from those that are less so, and this will have definite treatment ramifications.

Greater attention to rehabilitation has also been a factor in progress. An example of this is the development of surgical methods of voice restoration for patients undergoing laryngectomy. Progress in analyzing and treating swallowing disorders has been an area of major contribution, and further developments are anticipated.

Advances in reconstructive surgery—exemplified by the gains already seen in free tissue transfer by microsurgical means—will continue to play a major role. One can also anticipate continuing advances in the field of skull-base surgery.

Finally, one can only hope that further efforts in public education directed toward reducing use of tobacco and alcohol will lead to decreased incidence of some of the forms of head and neck cancer.