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The history of head and neck surgery

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Head and neck surgeons of today are grateful to the many physicians with foresight, expertise, and persistence who preceded them. Our philosophy and techniques of care today for the patient with head and neck disease are in no small part the result of the experiences of our predecessors over many years. Thus this history is worthy of review.

There are a number of good published histories of head and neck surgery, and we choose not to try to improve on these. Rather, we shall cover the historic high points and concentrate on events of the last 50 or so years, especially the contributions made by and the increasing role played by otolaryngologists–head and neck surgeons.

Celsus (AD 178) is often credited as the first head and neck surgeon to describe an operation for cancer of the lower lip. Others state that his lower lip operation was for the repair of a traumatic wound and, although he used the terms "carcinoma" and "carcinode," he advised against surgery for the treatment of cancer. Abulcasis (1013-1107) and Avicenna (980-1036) both described the excision of tumors of the lip with the wound left open to heal by secondary intention. Paré (1517-1590) and others of his day made no mention of the V excision and therefore probably never treated lip cancer. Credit for the first V excision, and therefore probably the first operation for lip cancer, goes to Liston in 1837, and Begia in 1839. Martin[1] describes these authors as using pins and twisted cords for closure of the incision.

Tagliacozzi (1545-1599) is well known for describing the repair of large surgical defects in various areas of the face by a pedicle flap from the upper arm. There were scattered reports in the seventeenth century of attempts to excise cancer of the tongue by cautery, or by chain or wire (écraseur). The first recorded attempt at removal of a cancer of the tongue by cautery was by Marchette in 1664, followed in 1676 by Richard Wiseman, who reported two such operations. Others attempted to cause a cancerous portion of the tongue to slough off by strangulation with heavy ligations (Inglis and Home, 1805). Section of the mandible to provide intraoral exposure was described by Sedillot (1866), who split the lower lip and mandible in the midline. Kocher (1880) described a submaxillary approach to the oral cavity. Liston, in his "Practical Surgery" (1837), briefly mentioned operations for tumors of the lip, tongue, jaws, thyroid, and parotid.

It is indeed impressive to think of the boldness and courage of these surgeons (and their patients) when one considers that ether was discovered in 1842, nitrous oxide in 1844, and chloroform in 1847. In the case of operations in the mouth and pharynx, the cumbersome inhalation apparatus placed over the mouth and nose obstructed the maneuvers of the surgeon. Bleeding was difficult to control, making drowning from aspirating copious secretions and hemorrhage a danger. Local

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anesthesia in the form of cocaine was not discovered until 1880, and procaine was discovered in 1923.

Even tracheotomy was an operation fraught with complications and not widely practiced, either to relieve respiratory obstruction or to prevent the problems of aspirating blood. Surgical opening of the trachea to relieve respiratory obstruction is mentioned by Galen (AD 131-210), and there are interesting apocryphal references to surreptitious prophylactic tracheostomies in criminals about to be hanged.

Another interesting and relevant historic fact is the lack of microscopic identification of cancer before the late 1800s. Dr. George Elliott in 1885 promoted interest in histopathology by publishing a description of President Grant's cancer of the tonsil-tongue. The famous pathologist Virchow practiced during the late 1800s, and many are familiar with Sir Morrell Mackenzie's dispute with the German physicians caring for Frederick the Noble. Mackenzie insisted on a tissue diagnosis of cancer by Virchow, but his biopsies were probably inadequate, and the early diagnosis of cancer was not made.

Martin[1(p7)] describes cancer of the skin, including the face, as seldom diagnosed and treated early. In its earlier stages it was often confused with other ulcerative lesions (syphilis, leprosy, tuberculosis) and therefore neglected, whereas treatment by escharotics—arsenic, zinc, and so forth (Arnott, 1858; Bright, 1871)—was commonly used rather than surgery. Marsden, who founded the Royal Cancer Hospital (London) in 1851, stated that the policy of that institution regarding all superficial cancers was, "whenever possible to employ caustics, or otherwise avoid the use of the knife."[1(p 7)] Liston in the early 1800s stated, "the patient with cancer of the antrum may be numbered with the dead," and that its surgical treatment "is totally inadmissible; it is a piece of unmeaning and entirely useless cruelty." As late as 1908, Mosher referred to operations for cancer of the paranasal sinuses as "palliative" only.

Crile in 1906 published his monumental work on neck dissection. This was a turning point in the surgical treatment of head and neck cancer; however, progress was delayed because the operations were lacking in safety, and treatment with radiation therapy was thought to be more efficacious. The complications of aggressive treatment with radiotherapy were significant. Grant Ward and Hays Martin arose as strong advocates of radical surgery as a preference to radiotherapy. The availability of antibiotics, safe inhalation anesthesia, and blood transfusions facilitated the success of surgery.

The derivation of the term *commando resection* is interesting. Typically, a major head and neck resection was posted on the operating schedule as, for example, "hemimandibulectomy, radical neck dissection, resection of the base of tongue (or palate or wherever the primary tumor was located) and tracheotomy." This usually took up a number of lines on the operating room schedule but was necessary to let the operating nurses know which instruments and so forth to have available. Dr. Martin[1(p 13)] states in his book that this operation was being regularly performed at Memorial Hospital in 1942, the year of the Allied commando raids on Dieppe. The commandos were admired as courageous heros, and the residents at Memorial Hospital decided to describe this operative procedure as a "commando" operation, with the suffix denoting the location of the primary tumor. Thus the operation could be listed on the schedule as a "commando-base of tongue" to connote hemimandibulectomy, radical neck dissection, tracheotomy, and resection of the primary tumor. Some years later, Dr. Grant Ward suggested that this connoted an undignified assault on the patient, and he preferred the term *composite resection.*

Although, as might be expected, the earliest treatments for head and neck tumors were directed toward easily accessible lesions of the lips and tongue, it is impressive to review the early attempts to treat laryngeal lesions without anesthesia. Gordon Buck in 1853 described a laryngofissure for excision of cancer. This is even more impressive when one considers that diagnosis was not aided until the introduction of the laryngeal mirror in 1854. Laryngectomy gained in favor during the first quarter of the twentieth century because of the efforts of St. Clair Thomson in England and Chevalier Jackson in the United States. H. B. Sands reported the use of ether in this operation in 1865. Review of the reports of that period revealed immediate and postoperative mortality in laryngofissure to be in the neighborhood of 30%. The cases were poorly selected, and because of the advanced stage of the disease, cures were seldom, if ever, obtained. In 1878 Paul Bruns concluded that "the attempt at radical extirpation of cancer of the larynx by means of thyrotomy has proved itself completely unsatisfactory and worthless."

It was not until the 1890s and the early part of the twentieth century that the operation came into favor. Again, reference to Sir Morell Mackenzie and consideration of the treatment of Frederick the Noble is significant. Mackenzie's ostensible reason for not recommending surgery was that no positive biopsy had been obtained, but a review of his publications reveals that he had no great faith in laryngectomy. In one publication, he stated that in cancer of the larynx, "our aim must be to prolong life when possible, and in every case to promote euthanasia when the inevitable end draws near." Martin[1(p8)] states that the earlier meaning of euthanasia in Mackenzie's time referred to the less

drastic relief of suffering in the terminal stages of cancer by palliative care and the liberal use of sedatives and narcotics, rather than the current definition of "the act of putting to death . . . which at present is a highly controversial matter from moral and legal standpoints."

Billroth is credited with having performed the first successful total laryngectomy for cancer in 1873. His patient died of a recurrence 8 months later, and the operation was not received with great favor. Of Billroth's first 25 surgical cases before 1890, not one patient survived a year. Gluck in the 1880s was a strong advocate of total laryngectomy and even attempted pharyngolaryngectomy. Gluck vividly described the mortality ". . . erysipelas, phlegmon, secondary hemorrhage, mediastinitis, bronchitis and septic bronchopneumonia, septicaemia, shock . . . so that a mortality of 25% after these operations was really at the time too low a figure statistically."[1(p 8)]

Solis Cohen (Philadelphia) performed the first American laryngectomy in 1884; the patient survived for 11 years. Another patient on whom he performed a laryngectomy in 1894 was the first patient in whom esophageal speech was documented.[15]

By 1926 MacKenty was able to report on more than 100 cases, with an operative mortality of only 4%. Martin[1] reports that the performance of laryngectomy on an extensive scale began at Memorial Hospital in 1933. His experience is worth repeating.

> I can well remember in the early 1920s marveling at the first laryngectomy that I had ever seen. The patient, Violet D., an actress, had been successfully operated upon by the late H. H. Janeway about 1917 or 1918. She developed an excellent esophageal voice, and I subsequently followed her regularly in the out-patient department well into the 1930s. At that time, McKenty was the only surgeon in the New York area to perform total laryngectomies frequently. In the early 1920s it was rather widely believed, especially at Memorial Hospital, that radiation therapy would entirely replace surgery in the treatment of cancer. As an ambitious young surgeon, I can recall at that time regretting that I was born too late to ever have the opportunity to perform this operation which seemed to me to have so many fascinating possibilities. The belief in the 1920s that a total laryngectomy was an outmoded operation has proved to have little foundation. The operation is being performed in about 1500 cases in the United States annually, and during the last several years, my associates and I at Memorial Hospital have performed it in well over 100 cases annually.[1(p9)]

Otolaryngology subsequently made significant contributions to the sophistications of partial laryngectomy through such persons as Alonso, Ogura, Som, Biller, and Pearson.

As the advent of antibiotics facilitated the performance of radical head and neck surgery, many thought that they would signal the demise of the specialty of otolaryngology because otolaryngologists were known as "the surgeons of infection." Credit must be given to a small group of otolaryngologists who, fascinated with head and neck surgery and the possibilities and challenges for otolaryngologists, pursued the field aggressively. It must be remembered that general surgeons looked down on otolaryngologists becoming involved in this field because of their lack of training in general surgery. Recall that residencies in otolaryngology during that period did not require any exposure to the field of general surgery. In the late 1940s and 1950s a number of otolaryngology residents-in-training at Manhattan Eye, Ear, Nose and Throat Hospital enjoyed going across the street to watch Hayes Martin operate at Memorial Hospital and to attend his head and neck tumor conferences. Among these observers were Drs. F. Johnson Putney, Ed Cocke, W. Franklin Keim, George Sisson, and William Trible. These pioneering otolaryngologists shared their excitement with others. Dr. John Conley returned from World War II with significant reconstructive surgical experience and entered practice with Dr. George Pack in New York City. Dr. Conley shared his knowledge and experience with many other otolaryngologists. Other older otolaryngologists saw the future of their specialty in this field, men like Drs. John Bordley, Jerome Hilger, Chevalier Jackson, Dean Lierle, John Daly, G. Slaughter Fitz-Hugh, Paul Hollinger, Frank Lathrop, Julius McCall, and Joe Ogura. Most of these men were directors of the American Board of Otolaryngology who saw the need for training in general surgery and made at least 1 year of general surgical residency an additional requirement for board certification in otolaryngology.

The history of medicine shows that physicians who develop a particular interest soon form an association with others similarly inclined, to share their knowledge and experience. The general and plastic surgeons doing this work formed the Society of Head and Neck Surgeons (SHNS) in 1956 and excluded otolaryngologists from participation in this organization. Dr. Hayes Martin, the previously mentioned Chief of Head and Neck Surgery at Memorial Hospital, was a primary founder of the SHNS and looked down on "ears, nose and throaters" doing this work. The American Academy of Ophthalmology and Otolaryngology established a committee on head and neck surgery so that this group of "young Turks," as they (that is, the aforementioned group of otolaryngologists interested in this field) were known could have a "study club" and a place to meet at the annual academy meeting. The previously mentioned group was now augmented by Dr. John Lewis, who had a residency in general surgery, and Dr. John

Loré, who was board certified in both general surgery and otolaryngology. Dr. George Sisson, in his book, *The Head and Neck Story,*[6] dramatically describes the evolution of this group and how it was fortunately encouraged by three senior statesmen in the specialty, Drs. Gordon Hoople, Dean Lierle, and Leroy Schall (Professor and Chairman at Harvard, who was talked into chairing this committee). Sisson describes how this Academy "Head and Neck Study Group" had its first meeting at the Palmer House in Chicago on October 13, 1957, and discussed the pros and cons of forming a society of head and neck surgeons within otolaryngology. The culmination of this dialog was the formation of the American Society for Head and Neck Surgery (ASHNS) the following year. The details of the formation and evolution of this group are detailed in the aforementioned book by Dr. Sisson, which is available in a very limited quantity from the American Academy of Otolaryngology–Head and Neck Surgery.

There initially was significant hostility and distrust between the otolaryngology members of the ASHNS and the general and plastic surgeon members of the SHNS. Rational members of the leadership of each of these head and neck surgical societies recognized that the members of both societies had the same objective: to optimize the quality of care of the patient with head and neck disease. With this as a basis for dialog, the leadership of both societies began meeting on a regular basis at least twice a year to discuss problems of mutual concern. Early on, there was agreement to share educational opportunities and to come to agreement on what should constitute the training of a head and neck surgeon. Dr. Jack Loré, Director of the Otolaryngology Residency Program in Buffalo, New York, board certified in both general surgery and otolaryngology, and a member of both of the head and neck societies, had more credibility with the leadership of SHNS than many lesser trained individuals. At a joint meeting of the councils of both societies in 1977, Dr. Loré was appointed to head a joint committee of the two societies to decide what should constitute the training of a head and neck surgeon. This appointment followed some 10 years of involved evaluations of what this education should be by separate committees in each society. Dr. Harry Southwick chaired such a committee for the SHNS in 1968 and was succeeded by Dr. Loré as chairman in 1974. Dr. Loré chaired a similar committee for the ASHNS in 1968; that committee consisted of Drs. John Conley, John Daly, Joe Ogura, Don Shumrick, George Sisson, Walter Work, and then-President Frank Keim.[6(p 100)] The joint committee was composed of an equal number of members from the two societies and concluded that fellowships should be established for postresidency training and should consist of a balanced oncologic experience with exposure not only to surgery but also to all of the modalities involved in the treatment of a patient with head and neck cancer. The joint committee also concluded that certified graduates of residency programs in either general surgery, plastic surgery, or otolaryngology would be eligible for postgraduate fellowships to be approved by the joint committee. Site visits were made by members of the joint committee to those institutions desiring to have such a fellowship. The surveyors were experienced head and neck surgeons from otolaryngology, general surgery, and plastic surgery, and they subsequently approved fellowships at Northwestern (Dr. Sisson), M.D. Anderson (Dr. Goepfert and Dr. Jesse), Memorial Hospital (Dr. Strong), University of Toronto (Dr. Bryce), Stanford University (Dr. Fee), University of Arkansas (Dr. Suen), University of Texas–Galveston Medical Branch (Dr. Bailey), University of Cincinnati (Dr. Shumrick), University of Virginia (Dr. Cantrell), Montefiore Medical Center (Dr. Silver), Albany (Dr. Goldstein), University of Alabama (Dr. Mattox), and Buffalo (Dr. Loré).[6(p 108)] Dr. Loré shepherded this joint fellowship accreditation committee for more than 15 years and deserves significant credit for the success of this program. Today, there are 22 approved fellowships, 19 of which are based in departments of otolaryngology, and now are of 2 years' duration. The process by which these programs are accredited by the two head and neck societies is truly a model for the approval of fellowships in other specialty areas.

In New York, Dr. Martin was succeeded as Chief of the Head and Neck Service at Memorial Hospital by Dr. Edgar Frazell, who perpetuated similar attitudes. The next Chief was Dr. Elliot Strong. Dr. Strong was an outstanding techincal surgeon who was widely respected for his principles, ethics, and ideals. He demonstrated an early appreciation for the skills of the otolaryngologist in head and neck surgery. In 1981 he became a Fellow of the ASHNS and soon thereafter became a member of the Council of that Society. In 1982 he made an otolaryngologist, Dr. Roy Sessions, a member of his head and neck team at Memorial Hospital, and Dr. Sessions stayed there for some 8 years, leaving in 1989 to become Chairman of Otolaryngology–Head and Neck Surgery at Georgetown Medical School. Dr. Sessions developed a speech and hearing center while he was at Memorial Hospital, a fine adjunct to the Head and Neck Service. In 1986 Dr. Strong applied for and was elected to Fellowship in the American Academy of Otolaryngology–Head and Neck Surgery, the first nonotolaryngologist general surgeon to do so. This served as another manifestation of his influence on the improved

relationship between general surgery and otolaryngology–head and neck surgery.

In recognition of the similar objectives and interests of the two societies, the ASHNS and SHNS have had successful joint meetings of the two societies in 1973 in Hot Springs, Virginia, 1976 in San Diego, 1978 in Toronto, 1981 in Phoenix, and 1985 in Puerto Rico. International meetings were jointly sponsored by the two societies in 1984 in Baltimore, 1988 in Boston, 1992 in San Francisco, and 1996 in Toronto.

These joint meetings have led to a rapprochement, and therefore the hostility and distrust of the early years has, to a significant extent, disappeared. There has been repeated consideration over the years to merging the two societies, but that degree of rapprochement has not yet been reached. Today several hundred otolaryngologists are members of the SHNS as well as the ASHNS, Jack Loré has been President of the SHNS, and the Hays Martin Lecture at SHNS has been given by a number of otolaryngologists in recent years. This represents quite an evolution from the early days of Dr. Martin's influence on the policies of the SHNS.

Otolaryngologists have made a number of significant contributions to the treatment of the patient with head and neck cancer. Their contributions to conservation laryngeal surgery have previously been mentioned. Another significant contribution was the introduction of cryosurgery by Dr. Daniel Miller. Dr. Miller was Chief of the Head and Neck Oncology Clinic of the Sydney Farber Institute in Boston and was the eleventh president of the ASHNS from 1974 to 1975. Dr. Miller was an enormous contributor to work in the field of head and neck surgery, especially in the exploration of multidisciplinary approaches to treatment combining the use of surgery, radiotherapy, and chemotherapy. In the mid-1960s, he explored the use of liquid nitrogen in the treatment of early tumors, especially those involving the vocal cords. He was a willing teacher of this technique, often visiting medical centers at the request of those who wanted to learn. He was a proponent of the aggressive use of liquid nitrogen to treat early tumors and to palliate advanced recurrent tumors, especially those of the tongue base and antrum.

Another innovator was Emmanuel Skolnick, the twelfth president of the ASHNS, who was an early proponent of the preservation of the eleventh nerve in neck dissections, and thus an early proponent of modified neck dissection.

The area, or physical dimensions, for which a head and neck surgeon is responsible has changed considerably through the years. It now reaches intracranially beyond the base of the skull and down into the mediastinum. George Sisson was an early advocate of the need to enter the upper mediastinum to gain access to lymph nodes potentially involved with disease in recurrent cancer after laryngectomy.[7] Collaboration with neuro, thoracic, general, and vascular surgeons has extended boundaries for the otolaryngic head and neck surgeon, and cooperatively new frontiers above the dura and below the pleura have been crossed, but form and function have been preserved. Drs. Sisson and Goldstein[7-10] were early advocates with Dr. Conley of using regional tissues in the reconstruction of head and neck defects. Starting in the late 1960s and through the 1970s, they gave courses at the annual Academy meeting in use of grafts and flaps in head and neck surgery. George Reed[11] introduced dermal grafts to otolaryngology in 1965, primarily to protect the carotid artery in those patients who had a radical neck dissection after heavy preoperative radiotherapy. If skin flaps subsequently necrosed, Dr. Reed demonstrated how this graft, when properly used, would protect the artery, and indeed many patients owed their lives to this graft. Ariyan[13] in 1979 introduced the pectoralis myocutaneous flap, and Blaek et al.[14] popularized its use in otolaryngology. This essentially obviated the need for the dermal graft for carotid artery protection. Goldstein continues to advocate dermis as an intraoral graft.[10] The advent of microvascular anastomoses enabled free flaps to replace regional flaps in head and neck reconstruction,[12] and their use with bone as a composite flap has facilitated mandibular replacement. With some reservations we now say that we've gone about as far as we can go in terms of extirpative surgery.

Years ago cancer patients were often treated exclusively by either surgical or nonsurgical methods, as we have portrayed. Standard treatment today for stage III and IV tumors is combination therapy. Coincident with advances in surgical technique and adjuvant therapy is the obsolescence of some well-known procedures frequently used in the past, such as radical neck dissections.

On November 7, 1979, in Washington, D.C., Dr. Bobby Alford, attending one of the last Executive Board meetings of the old American Academy of Otolaryngology, commented at length on the future of otolaryngology. He reported with fervor on the recent proceedings of the U.S. Manpower Commission for Medical Specialties and woefully warned our Executive Committee that soon there would be legislative incentives to reduce all specialties promulgating the wide use of paramedics. Also, an increase in the number of general practitioners would be favored, which in turn would supposedly reduce the total number of specialists, saving Medicare monies in the process. Dr. Alford believed that students would

naturally be discouraged from entering the specialties and would opt for family practice. To help stem this avalanche of projected change, two important groups were organized by concerned otolaryngologists, the Society of University Otolaryngologists and the Society of Academic Chairmen of Otolaryngology, which subsequently became the Association of Academic Departments of Otolaryngology. What an accurate prediction this proved to be!

Today in many centers there is a trend toward performing fewer procedures and less aggressive surgery because alternative treatments provide patients with options. Radical procedures are time consuming, cause significant morbidity, and require prolonged hospitalization. Although we do not support the concept of "rationing" surgery, it is almost certain that limits may be imposed on us by health care reform. The direction of our state of activity appears to be forcing our medical trainers to produce generalists at the expense of specialists, just as Dr. Alford predicted. This not only will decrease the number of surgeons capable of performing complex procedures but also will compel physicians to use nonsurgical methods to treat cancer. The bottom line is, of course, the cost.

Exciting strides have been made in head and neck reconstruction. Microvascular surgery has become a superior technique for the restoration of form, function, and appearance, most notably jaw contour, swallowing, and facial cosmesis. Osseointegrated dental implants and an improved understanding of the physiology of swallowing have refined reconstructive techniques. Mandibular repair with distraction osteogenesis and replacement with biodegradable implant materials might well become the state of the art within the next decade. Even the realm of functional soft tissue transplantation may be breeched by head and neck surgeons in the next century.

One of our greatest challenges to be faced in the future will be to maintain our present high quality of head and neck surgical training. Both those who teach and those who train will be hard-pressed to keep abreast of the anticipated changes in surgical equipment and techniques, the increasingly sophisticated methods for early cancer detection, contemporary research and research applications, and ever-changing applications of radiotherapy and chemotherapy and, now, immune therapy and, in the future, genetic manipulation. Widespread incorporation of modern technology with medical training may be limited by stringent health care reform precluding many past teaching luxuries and may cause gaps in programs because resources will be directed elsewhere. Because many cancer patients are being treated by other fields due to cost and technology, it is uncertain whether in the future fewer otolaryngology residents will be allowed to train and whether they will be given adequate exposure to surgical head and neck cancer. Funding for graduate medical education is being challenged. Despite failure to persuade the 103rd Congress to enact widespread health reform in 1994, it is likely that future legislation and market forces will dramatically alter the current landscape of health care. Whether managed care programs will treat cancer patients locally or refer them at higher cost to a tertiary care institution is unknown. Whether the cost containment concept of health maintenance organizations will delay diagnoses in a sufficient number of patients with head and neck cancer so that greater overall expenses are eventually generated is also unknown. Overlooked in the rush for cost-containment is that society's ills drive up health care costs. Health care needs would be quite different if society were free of tobacco, alcohol, drugs, firearms, domestic violence, and poverty. It is inevitable that medical training for the head and neck surgeon will be different in the future.

We have tried to highlight in this article the valuable contributions that the past has made to the head and neck surgeon of today. The surgeons of today are grateful to the many physicians with foresight, expertise, and persistence who preceded them. The considerable number of important changes in head and neck oncology that have come about in just the past half century—the use of antibiotics, chemotherapy, radiation therapy, cryotherapy, improved advanced surgical and diagnostic technologies—foster the belief that the next half century may produce measureless improvements in the management of head and neck cancer as these technologies continue to evolve. The past insistence on excellence in training must not be compromised.

Physicians who treat patients with head and neck cancer are devoted to arresting, if not curing, this fearful disease. Their reward lies in the fulfillment derived from checking, if not removing, the relentless progression of a potentially fatal affliction. The physical and emotional commitment demanded from these surgeons is recognized by patients and peers alike.

Treatment of head and neck cancer requires the surgeon to exercise moral and ethical judgment often more than usual for a physician. The stringency of clinical reality must be balanced with empathy for the patient, who must ultimately decide the quality of life he or she desires. How fully should the patient be informed of the risks and benefits of treatment? How does one obtain consent for treatment that may significantly alter appearance and function? When cure cannot be effected,

what determines which treatment will provide optimum palliation? How can one couch the fact that, on occasion, the best treatment may be no treatment? Perplexing questions are endemic, not only for the surgeon of today but also for the surgeon of yesteryear.

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