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HEAD AND NECK SURGERY: CHALLENGES AND CHOICES

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TO : *Dr.* David Seel

TALK GIVEN TO THE 1ST MEETING OF THE SOCIETY OF HEAD AND NECK ONCOLOGIST OF KOREA

I bring you greetings from the Society of Head and Neck Surgeons and congratulate you on your efforts to promote an association of Head and Neck Oncologist here in Korea. One might question the need for such an organization since cancer of the head and neck region is relatively uncommon except in such places as India where the percentage instance of oral cancers reaches 50 % of all cancers. In the United States cancer of the head and neck constitutes some 15% of all cancers, and I would doubt if the instance is much greater than that here in Korea. Since it is an uncommon cancer no one person or institution sees a great volume and we need to share and compare our experiences if we are too offer our patients the best treatment.

In no place in the body are so many vital functions and organs concentrated as in the head and neck area. It is here that we initiate the processes of respiration and digestion, that we hear, see, taste and smell. We communicate our thoughts and emotions through this region. In fact, much of what constitutes us as individual personalities transpires through the proper functioning of the organs of this region and we must maintain a reasonable integrity of the head and neck area if we are to function adequately and happily as complete members of society. Cancer of the head and neck constitutes a great threat to the integrity of the patient and it is necessary that all interested specialists in the field cooperate if the best results are to be achieved.

During the past 80 years thers has been an accelerating proliferation of disciplines which have been brought to bear on head and neck cancer. Initially treatment was by surgery whether it was done by the general surgeon, the otolaryngologist or the plastic surgeon. Then came the radiotherapist, the medical oncologist, the immunologist and the pathologist with a special interest in head and neck cancer. Added to these interested personnel came the prosthodontist, the oral surgeon, the rehabilitation specialist, the nutritional support teams, the social workers and a host of others. We now have access to a multitude of chemotherapeutic agents which can be delivered in a variety of routes–orally, intravenously or intra– arterially either discontinuously or continuously, sometimes with the implantable infuseaid pumps. The radiation therapist now have a multitude of radiation energies from gamma rays to electron beams, neutron beams, negative Pi mezons and a variety of means for delivering radiation either through external beams, interstitial implants or intravenously in the form of radioactive materials which are sometimes attached to monoclonal antibiotics. In addition, we have other energy forms such as the laser, hyperthermia, and cryosurgery. The number of combinations which it is possible to employ is bewildering and it is difficult to keep abreast of this state of the art. Amidst all the wealth of new information I think that we need to keep in mind that we are treating a patient with a particular cancer which is somewhat unique to him-

self. We therefore need to have in mind a scheme of treatment aims.

1. Our first aim is to cure the patient of the cancer with which he presents.

   Cure is a relative term for although we may cure a skin cancer, we do not alter the basic underlying mechanism which led to the development of that first cancer.

2. Secondly, we should aim to conserve or restore as much of the vital structures involved by the cancer as in possible.

   This includes psychological, as well as physiological restructuring.

3. Thirdly, we should employ whenever possible that treatment modality which has the least likelihood of undesirable late sequelae.

   The defects created by surgery are ordinarily static, improving, or capable of improvement by surgical or other means. The sequelae of radiation therapy are frequently late in appearance, may be progressive and are ordinarily difficult to reverse or improve. This is not of great importance in the aged, but it is of significant concern in the young.

4. Fourthly, we should try to do all of this without imposing an impossible economic burden on the patient.

   Frequently we fall far short of these ideals. The treatment of a patient with head and neck cancer should be highly individualized whenever possible-treatment by a set routine is only resorted to when one is adhering rigidly to protocols.

There are many factors which should be considered in deciding upon a treatment regime for the patient, among these may be considered the following:

1) **Biologic factors related to the tumor**: The histology of the tumor is frequently a determining factor in dictating the method of treatment. For example: A verrucous carcinoma of the buccal mucosa with surrounding leukoplakia is ordinarily best treated by surgery with removal of not only the cancer, but the surrounding leukoplakia which may be considered to be precancerous. Lymphomas are by and large the province of the radiotherapists and chemotherapists. Rhabdomyosarcomas and most of the tumors of children fall within the province of the chemotherapists and the radiation therapists. It is only in this group of patients with these particular kinds of tumors that the combinations of radiation therapy and chemotherapy have made such tremendous differences in survival. The benign tumors of parotid and other salivary glands are ordinarily surgical problems.

Since the vast majority of head and neck cancers are squamous cell cancers originating either in the skin or lining of the gastrointestinal tract, the decision as to form of treatment is not dictated so much by the histologic nature of the tumor as it is by the behavior. Exophytic tumors which are well vascularized will ordilnarily respond well to radiation therapy although if the tumor is exophytic and easily assessible, a surgical treatment might be both easier on the patient and less time consuming. Deeply infiltrative squamous cell carcinomas on the other hand, are seldom eradicated by radiation alone particularly if they are invading bone, and here surgery is the preferable means of treatment to be followed if necessary by postoperative irradiation. Although it is difficult to assess completely the accuracy of the patient's story regarding the rate of growth of his cancer, it is quite likely that the very rapidly growing squamous cell carcinomas with multiple nodal metastases are probably best treated either by radiation therapy alone or by a combination

of radiation therapy and chemotherapy, other factors being equal.

2) **Age, physiologic status of the patient**: The young patient should be treated surgically if equal results can be achieved by radiation therapy or surgery, since the late effects of surgery are minimal whereas; the late effects of radiation therapy can be diasterous. The elderly patient tolerates very poorly a prolonged course of radiation therapy. He may tolerate better the short period of insult from a surgical procedure. The nutritional status of the patient is likewise of significance. The debilitated alcoholic patient tolerates very poorly either radiation therapy or surgery, but ordinarily will tolerate surgery better than a prolonged course of radiation therapy. Some of the habits of the patient may influence the choice for treatment. The heavy cigarette smoker and the heavy user of snuff and chewing tobacco, ordinarily are best treated surgically if a surgical treatment seems feasible because if the patient continues the use of tobacco following radiation therapy the likelihood of development of additional primary cancers in the irradiated field is quite high and the problems of treating a cancer originating within such a field are difficult.

3) **Psychological status and wishes of the patient**: The use of chemotherapy and radiation therapy requires the long term cooperation of the patient. The disturbed or mentally unstable patient will not easiiy cooperate during such a prolonged course and ordinarily a surgical treatment is more feasible. Likewise, since the patient must give consent to the treatment performed, his wishes have to be taken into consideration. There are some individuals who will completely refuse surgery even though this may be the preferable form of treatment, and then radiation therapy or some other form of treatment must be instituted.

4) **Economic considerations**: The treatment of cancer is increasingly expensive and the cost of treatment must be borne in mind when deciding upon a particular method. For example, although skin cancers can be ordinarily treated by radiation therapy or surgery, in order to provide a satisfactory cosmetic result the radiation therapy must be fractionated over a period of many days, whereas; a surgical procedure for most skin cancers can be done under local anesthesia as an outpatient even though a skin graft may be required. In an institution such as the M.D. Anderson Hospital where thousands of skin cancers are treated, the vast majority are done so by the surgeon for several reasons: (1) the multiple lesions can be treated at the same sitting. (2) most skin cancers occur in individuals whose complexion is such that they can be expected to develop additional cancers and the irradiated skin of the exposed areas of the body tolerates exposure to sunlight rather poorly. If one is to consider combination therapy, one must remember that the more modalities that are employed, the greater morbidity for the patient, the longer the absence from work and the greater the cost of treatment. It would seem unreasonable to treat a patient by combination of radiation therapy, chemotherapy and surgery if a single modality alone would suffice.

5) **Skills available**: Skilled surgeons, radiotherapists and chemotherapists are not available at all institutions in all surroundings. If in any given location the radiotherapist has the greater experience, interest and skill, then he is the logical one to treat the patient; whereas, if in a particular locality the surgeon has the greater interest, training and skill, then he would seem the one to be the primary therapist. Most cancers are not treated in centers where all

major skills are available and it is up to each individual seeing a patient with cancer of the head and neck to decide for himself whether he is capable of providing the best means for treatment of that patient or whether he should refer him elsewhere where additional more skilled personnel may be available.

The available treatment methods and the multiple skills that are currently being brought to bear on the treatment of head and neck cancer, bring with them economic problems which will eventually have to be faced. At some point a decision may have to be reached as to whether it is justifiable to try to treat all patients regardless of how advanced their cancers may be. Such choices are not easy ones. Neither are the choices regarding the relative merits of treatment by a solo practioner or by a specialized group easily answered. Hopefully groups such as those which you are forming can share experiences and lead to some conclusions regarding the best means of treatment of the patient with head and neck cancer which you see.