

NEW APPROACHES TO TREATMENT OF NASOPHARYNX CARCINOMA

by Gil Lederman, MD

One of the hidden areas of the body seldom spoken about is the nasopharynx. Few diseases affect the nasopharynx, especially in the United States.

Cancers afflicting this part of the body are unusual. The location of the nasopharynx is directly behind the nose, above the mouth, in front of the spine and below the brain. The nasopharynx connects to the middle ears via the eustachian tubes. A typically-sized nasopharynx is about an inch to an inch-and-a-half by about two inches.

Cancers of the nasopharynx are relatively common in China. The risk of cancer is decreased for Chinese people who have migrated to the United States but is still more frequent than that of non-Chinese people here.

The exact cause of this cancer is unknown but it is speculated to be either viral, genetic or social in origin. More men than women develop this cancer. The age at diagnosis is dramatically younger than other malignancies of this part of the body.

Standard of care treatment over the years has been external beam radiation therapy for nasopharynx carcinoma.

Data accumulated over the last decade shows dramatic responses using chemotherapy to shrink the tumor prior to the institution of radiation. Chemotherapy used prior to radiation or surgery is called neo-adjuvant. Chemotherapy's goal is to make the tumor smaller and hopefully therefore more susceptible to curative radiation therapy.

A new report published by Dimery et al evaluated the response of nasopharynx cancer to combination chemotherapy and radiation in a prospective manner. Reported were 47 patients with advanced cancer. All patients were evaluated extensively to determine the extent of disease. This is the so-called staging process. Biopsies were performed to confirm the diagnosis of malignancy in all patients.

Chemotherapy consisted of 5-FU and Cisplatin. The chemotherapy was repeated every three weeks for a total of three cycles. Radiation started three weeks after the end of chemotherapy and patients receive daily treatments for approximately seven to eight weeks, using a high energy linear accelerator beam. This being an American study, the vast majority of patients were non-Chinese although 10% of the patients originated from Asia.

Side-effects from chemotherapy and radiation were generally modest but on occasion could be very severe. In light of the young age of patients having this disease, generally aggressive treatment is instituted in an attempt to save life.

Follow-up evaluation after treatment ranged between 2-1/4 and 8 years with a median of more than five years. Eighty percent of the patients were alive at two years after the follow-up and 67% were alive six years after treatment. Two-thirds of the patients had no evidence of disease more than 4 years after treatment.

Although no randomized study is available comparing this aggressive treatment approach to other approaches, the results are better than one would expect from radiation treatment only. Randomized study is necessary to confirm the observation.

As the authors note "neo-adjuvant chemotherapy and radiotherapy is a curative combination in a high percentage of patients with advanced Stage IV nasopharynx carcinoma despite the relatively high incidents of local regional and distant metastases observed in those patients treated with radiotherapy alone. The high degree of tolerance to therapy and easy administration of this regimen in those individuals with bulky disease and in whom curative radiotherapy cannot always be delivered, lends credibility to the use of this approach as a viable initial alternative to radiotherapy alone."

Innovative new radiation approaches include radiation seed implantation to the nasopharynx. This allows higher doses of radiation to be given to the primary tumor while protecting the surrounding tissues. In certain circumstances, stereotactic radiosurgery - pencil-thin beams of radiation from thousands of angles - is used to boost the dose of radiation for nasopharynx carcinoma.

Knowledge of the benefits and risks of chemotherapy as well as radiation increase the likelihood of developing sophisticated treatment approaches like this for many once-dreaded diseases.

While radiation and chemotherapy are useful for those with newly diagnosed nasopharynx carcinomas, a new approach is using concurrent chemotherapy and fractionated stereotactic radiosurgery.

The appeal of this approach is that chemotherapy is used to sensitize the tumor to the radiation while fractionated stereotactic radiosurgery offers precision radiation to treat recurrent or metastatic nasopharynx carcinomas. The outcomes reported in national and international meetings have been highly appealing avoiding protracted courses of chemotherapy while using fractionated stereotactic radiosurgery.

Tumors, even those entering into the base of skull, have been controlled in the vast majority of patients thus treated with this technique.