Despite amazing advances in medicine in the last thirty years, cancer of the upper aerodigestive tract remains a feared and often life-threatening problem. Definitive surgical therapy often leaves a patient without a voice and with the social embarrassment of a permanent stoma. Some choose to avoid surgical therapy and an opportunity for cure as a result.

In the early 1980’s, physicians in Germany began to use the CO\textsubscript{2} laser to resect small upper aerodigestive tract malignancies in organ-preserving protocols. In many cases, they were able to preserve voice and swallowing and avoid even a temporary tracheotomy. That experience grew, so did the size and T stage of the tumors they treated. Results of transoral laser microsurgery have shown improved function and survival when compared to traditional open procedures, such as total and partial laryngectomy and laryngopharyngectomy, radiotherapy, and neoadjuvant chemotherapy and radiotherapy.

Transoral laser microsurgery is slowly becoming more popular in the United States as more American physicians are trained in the laser resection either in the few centers in this country that focus on laser resection or by study abroad. Currently, only four percent of all upper aerodigestive tract malignancies in this country are treated by minimally invasive transoral laser resection. However, at some institutions, well over half of all cases are treated using this method.

Those who have used transoral laser microsurgery have found striking advantages. First, unlike most open procedures, the nerves that provide sensation to the mucosa of the larynx and hypopharynx are left intact. This allows for a rapid return to an oral diet with minimal risk of aspiration. In my experience, a regular diet is resumed on the first post-operative morning.

Second, nearly all cases can be done without the need for a tracheotomy. Patients who would have typically "required" a total laryngectomy can be resected while maintaining an airway. I have not had to perform a tracheotomy, even for large laryngeal and hypopharyngeal masses.

An example of a patient is shown in Figure 1. This patient had a T2 hypopharyngeal squamous cell carcinoma that had spread onto the right arytenoid and into the interarytenoid tissue. Traditional teaching would have led this patient to a total laryngectomy. Figure 2 shows his negative margin post-laser resection result. He left the hospital the day after surgery on an oral diet and with a normal voice.

Most patients with laryngeal and hypopharyngeal tumors can now be offered this therapy with improved survival rates and a higher quality of life. This opportunity is available at The Iowa Clinic, P.C.—Iowa ENT. Please call (515) 241-5780 for more information.

**Transoral Laser Resection of Upper Aerodigestive Tract Malignancies**

By Douglas L. Schulte, M.D. • Otolaryngology

New Laser Therapy Offers Patients Improved Survival Rates and Higher Quality of Life

Dr. Douglas Schulte

Transoral Laser Microsurgery of Upper Aerodigestive Tract Neoplasms

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