Treatments for Locally Advanced Oropharyngeal Cancer: A Review

Key Messages

- For adult patients with locally advanced oropharyngeal cancer, it is unclear if treatment with primary surgery results in better oncologic outcomes after five years compared with treatment with primary concurrent chemoradiotherapy.
- The type of surgery, whether open surgery or a minimally invasive approach (i.e., Transoral Robotic Surgery [TORS] or Trans Oral Laser Microsurgery [TLM]), does not appear to affect oncologic outcomes compared with concurrent chemoradiotherapy.
- Patients undergoing primary chemoradiotherapy appear to be more likely to experience hematological toxicities (blood disorders) and pharyngitis (swelling at the back of the throat); but, after more than four years of follow-up, the most common complications — such as acute dermatitis, mucositis (inflammation of the mouth), chronic swallowing difficulty, dry mouth, and trismus (lockjaw) — appear to be similar between the two treatment strategies.
- In general, patients treated with chemoradiotherapy appear to experience better quality-of-life outcomes than those treated with surgery, but TLM or TORS may lead to better swallowing outcomes after one year.
- Larger clinical studies, with long-term follow-up, are needed, as are studies that stratify patients by HPV status, since HPV-positive oropharyngeal cancers may respond differently to different management approaches.
- An economic analysis conducted in the US suggests that, compared with TORS, primary concurrent chemoradiotherapy plus platinum-based therapy might be a cost-effective treatment for T1 to T2, N2a to N2b, p16-positive oropharyngeal cancer; however, the generalizability of this finding to the Canadian setting is unclear.

Context

Oropharyngeal cancer is a subset of head and neck cancer that originates in the oropharynx, which is the part of the throat at the back of the oral cavity. It is associated with HPV infection, alcohol use, and tobacco use. Oropharyngeal cancer is the 13th most common diagnosed cancer and the 15th most common cause of cancer death for adults in Canada.

Technology

Locally advanced oropharyngeal cancer in adults is managed using primary surgery — surgery as the initial treatment with adjuvant (the addition of) radiation therapy or chemotherapy if needed — or using primary chemoradiotherapy — chemotherapy delivered concurrently with radiation therapy as the initial treatment with salvage surgery (surgery to treat recurring cancer) if needed. Surgical treatment is typically performed as open surgery; however, minimally invasive options — TORS and TLM — have recently become available; these allow the surgery to be performed through the patient’s mouth and are thought to result in fewer surgical complications.

Issue

A review of the clinical effectiveness of primary surgery (with or without adjuvant radiation therapy and chemotherapy) versus primary chemoradiotherapy (with or without salvage surgery) for the treatment of adults with oropharyngeal cancer, as well as the comparative cost-effectiveness of the two regimens, will help guide treatment decisions for these patients.

Methods

A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).
Results
The literature search identified 772 articles, 53 of which were deemed potentially relevant. Of these studies, 15 met the criteria for inclusion in this review — 14 clinical studies and one economic evaluation.

Read more about CADTH and its review of treatments for locally advanced oropharyngeal cancer at:

[link]
cadth.ca/treatments-locally-advanced-oropharyngeal-cancer-systematic-review-clinical-effectiveness-and-cost-0.

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