Comparison study between surgical management and chemoradiation of advanced cancer larynx: outcomes

Thesis

Submitted for Partial Fulfillment of the Master Degree in Otorhinolaryngology

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2019

سورة البقرة الآية: ٣٢

Acknowledgment

First and foremost, I feel always indebted to Allah the Most Beneficent and Merciful.

No words could express my deepest thanks and appreciation to **Prof. Dr. Nabil Rabie,** Professor of Otorhinolaryngology, Faculty of Medicine, Ain Shams University, for inspiring me with the idea of this work. His patience, precious advice and guidance enlightened my way throughout this work.

I want also to express my profound gratitude to **Prof. Dr. Mohamed El Sharnouby,** Professor of Otorhinolaryngology, Faculty of Medicine, Ain Shams University, for his patience, valuable advice and continuous help in completing this work.

I am also deeply indebted to **Dr. Ahmed Abdelaziz,** Lecturer of Otorhinolaryngology, Faculty of Medicine, Ain Shams University, for his kind help, guidance, useful advices, continuous encouragement and support all through my entire work.

Finally, my deepest thanks to all my family and colleagues who helped me in the production of this work.

Contents

List of Abbreviations

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List of Figures

List of Tables

Abstract

Context: Laryngeal cancer represents one of the most common head and neck malignancies, accounting approximately for 20% of all cases. The vast majority of tumors are squamous cell carcinomas. Up to 40% of patients present with advanced disease.

Objective: To compare the efficacy of total laryngectomy and chemoradiation in patients with advanced cancer larynx stage stage 3 and 4.

Material and methods: The study include published medical articles concerning the efficacy of total laryngectomy and chemoradiation in treatment of cancer larynx stage 3 and 4 searching the Medline data base (www.pubmed.com) using a combination of the following key words. Over 140 articles were found, after removal of duplicates 96they narrowed to about 44 articles, after exclusion of non relevant articles 25 about 19 relevant articles were found, by application of inclusion criteria 11 articles were found meeting the inclusion criteria and can undergo Meta-analysis.

Results: The primary purpose of this meta-analysis was to include a large enough sample from published literature to reveal a possible significant difference between primary total laryngectomy and chemoradiation in terms of over all survival rate and disease specific survival rate. the efficacy of the treatment of locally advanced laryngeal cancer has been well established, pooling data from a large number of patients in this meta-analysis suggests that for advanced-stage laryngeal cancer, no superiority of TL to nonsurgical modalities was found in survival rates.

Conclusion: In conclusion, for advanced-stage laryngeal cancer, no strong evidence for the superiority of TL to chemoradiation was found in survival rates. Choice of treatment, whether it can be chemoradiation or TL, it is not a simple question in the choice of treatments for advanced-stage laryngeal cancer, so regardless of using TL or nonsurgical modalities, the factors such as tumor T stage and size, lymph node metastasis, and physical condition should be important reference indicators for adopting more suitable treatments.

Keywords: Surgical management and chemoradiation, Cancer larynx: outcomes

Introduction

Introduction

In the United States, laryngeal squamous cell carcinoma(SCC) represents approximately 96% of all laryngeal malignancies and is estimated to account for almost (1%) of all new cancer cases **(Bassu et al., 2013).**

Laryngeal cancer represents one of the most common head and neck malignancies, accounting approximately for 20% of all cases. The vast majority of tumors are squamous cell carcinomas. Up to 40% of patients present with advanced disease **(Karatzanis et al., 2014).**

The best therapeutic approach for the treatment of stage III cancer larynx is controversial. Treatment has included total laryngectomy alone, total laryngectomy with neck dissection, conservation surgery alone, radiation therapy alone, total laryngectomy combined with radiation therapy, total laryngectomy with neck dissection combined with radiation therapy, and conservation surgery combined with radiation therapy **(Sessions et al., 2002).**

Until the early 1990s, the standard treatment for locally advanced disease was total laryngectomy. This practice changed after the landmark trial conducted by the department of Veterans Affairs Laryngeal Cancer Study

Group, in which induction chemotherapy (cisplatin plus fluorouracil) followed by radiotherapy was compared with surgery plus adjuvant radiotherapy. The larynx was preserved in 64 percent of the patients who received the nonsurgical treatment, and the two-year survival rate was 68 percent in both groups **(Forastiere et al., 2003).**

A large survey of the patterns of care of laryngeal cancer in the United States was published in1997. Among the 1,800 acute care hospitals invited to submit cases, 769 hospitals provided data. The combination of surgery with irradiation increased, whereas the use of surgery alone as the initial management decreased **(Hoffman et al., 2006).**

Locoregional control and larynx preservation were significantly improved with concomitant cisplatin/RT compared with the induction arm or RT alone. New strategy that improve organ preservation and function with less morbidity is needed **(Forastiere et al., 2013).**

Aim of the Work

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To compare the efficacy of total laryngectomy and chemoradiation in patients with advanced cancer larynx stage stage 3 and 4.

Review of literature