



Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.ejcancer.com



Original Research

Long-term survival improvement in oesophageal cancer in the Netherlands



M. van Putten^{a,*}, J. de Vos-Geelen^b, G.A.P. Nieuwenhuijzen^c,
P.D. Siersema^d, V.E.P.P. Lemmens^{a,e}, C. Rosman^f,
M.J.C. van der Sangen^g, R.H.A. Verhoeven^a

^a Department of Research, Netherlands Comprehensive Cancer Organisation (IKNL), The Netherlands

^b Department of Internal Medicine, Division of Medical Oncology, GROW – School for Oncology and Developmental Biology, Maastricht UMC+, Maastricht, The Netherlands

^c Department of Surgery, Catharina Hospital, Eindhoven, The Netherlands

^d Department of Gastroenterology and Hepatology, Radboud University Medical Centre, Nijmegen, The Netherlands

^e Department of Public Health, Erasmus Medical Centre Rotterdam, The Netherlands

^f Department of Surgery, Radboud University Medical Centre, Nijmegen, The Netherlands

^g Department of Radiotherapy, Catharina Hospital, Eindhoven, The Netherlands

Received 22 August 2017; received in revised form 14 February 2018; accepted 16 February 2018

KEYWORDS

Oesophageal cancer;
Treatment;
Survival;
Trends

Abstract *Background:* Treatment for oesophageal cancer has evolved due to developments including the centralisation of surgery and introduction of neoadjuvant treatment. Therefore, this study evaluated trends in stage distribution, treatment and survival of oesophageal cancer patients in the last 26 years in the Netherlands.

Patients and methods: Patients with oesophageal cancer diagnosed in the period 1989–2014 were selected from the Netherlands Cancer Registry. Patients were divided into two groups: non-metastatic (M0) and metastatic (M1). Trends in stage distribution, treatment and relative survival rates were evaluated according to histology.

Results: Among all 35,760 patients, the percentage of an unknown tumour stage decreased from 34% to 10% during the study period, whereas the percentage of patients with metastatic disease increased from 21% to 34%. Among surgically treated patients 32% underwent a resection in a high-volume hospital in 2005 which increased to 92% in 2014. Use of neoadjuvant chemoradiotherapy increased in non-metastatic oesophageal adenocarcinoma (OAC) and squamous cell carcinoma (OSCC) patients from respectively 4% and 2% in 2000–2004 to 43% and 26% in 2010–2014. Five-year relative survival increased from 8% to 22% for all patients; from 12% to 36% for non-metastatic OAC and from 9% to 27% for non-metastatic OSCC over 26 years. Median overall survival of metastatic patients improved from 18 to 22 weeks.

* Corresponding author: Netherlands Comprehensive Cancer Organisation (IKNL), Research Department, Zernikestraat 29, 5612 HZ Eindhoven, The Netherlands.

E-mail address: m.vanputten@iknl.nl (M. van Putten).

<https://doi.org/10.1016/j.ejca.2018.02.025>

0959-8049/© 2018 Elsevier Ltd. All rights reserved.

Conclusion: In the Netherlands, survival for oesophageal cancer patients improved significantly, especially in the period 2005–2014 which might be the result of better treatment related to the centralisation of surgery and introduction of neoadjuvant chemoradiotherapy.
© 2018 Elsevier Ltd. All rights reserved.

1. Introduction

Oesophageal cancer is the sixth leading cause of cancer-related mortality and eight most common cancer worldwide [1,2]. It affects 456,000 people worldwide annually and the incidence is increasing rapidly [1]. There are two major histological types, oesophageal adenocarcinoma (OAC) and oesophageal squamous cell carcinoma (OSCC) each with a distinct aetiology and specific risk factors [3]. Although OSCC accounts for approximately 90% of all cases of oesophageal cancer worldwide, OAC has become the predominant type of oesophageal cancer in Europe and Northern America during the past decades [1,4].

Treatment of oesophageal cancer has been subjected to paradigm shifts in the last two decades. Long-term results from the CROSS trial confirmed the clinical value of multimodality treatment for oesophageal cancer with a 5-year overall survival difference of 14% in favour of patients who underwent neoadjuvant chemoradiotherapy followed by surgery compared with surgery alone [5,6]. Furthermore, endoscopic treatment was introduced for treatment of early-stage tumours and definitive chemoradiotherapy is increasingly considered as a well-tolerated alternative for surgery in inoperable patients and especially in squamous cell oesophageal cancer [7–10]. Besides these major changes in treatment, improved diagnostic procedures facilitated a better patient selection [11–14].

Oesophageal cancer surgery has been increasingly centralised in the Netherlands. As of 2006, surgical treatment for oesophageal cancer was centralised in hospitals performing a minimum of 10 resections per year and since 2011 a minimum of 20. Concentration of oesophageal cancer surgery has been shown to be associated with improved long-term overall survival for surgically and non-surgically treated patients [15,16]. As treatment for oesophageal cancer has evolved over the last few decades due to several developments such as centralisation of surgery and new treatment approaches, the aim of this study was to evaluate trends in treatment and survival of patients with oesophageal cancer in the Netherlands.

2. Methods

2.1. Netherlands Cancer Registry

Data were obtained from the Netherlands Cancer Registry (NCR). This registry serves the total Dutch population of 16.9 million inhabitants. The NCR is based on

the inclusion of all newly diagnosed malignancies in the Netherlands by the national automated pathological archive. Additional sources are the national registry of hospital discharge and radiotherapy institutions. Specially trained data managers of the NCR routinely extract information on diagnosis, tumour stage and treatment from the medical records. Information on vital status is obtained through annual linkage with the Municipal Administrative Database, in which all deceased and emigrated persons in the Netherlands are registered.

Patients with oesophageal cancer (C15.0–C15.9) diagnosed in the period 1989–2014 were selected. Topography and morphology were coded according to the International Classification of Diseases for Oncology (ICD-O) [17]. ICD-O morphology codes were used to classify tumours as adenocarcinoma, squamous cell carcinoma and other or unknown histology. Subsite distribution was divided as: cervical (C15.0), proximal 1/3 (C15.3), middle 1/3 (C15.4), distal 1/3 (C15.5) and overlapping or not otherwise specified (C15.8, C15.9).

Tumour staging was performed according to the Union for International Cancer Control (UICC) TNM classification that was valid at the time of diagnosis. As tumour stage classification was comparable from TNM-4 to –6 but changed with the introduction of TNM-7, all patients were recoded (stage I to IV and unknown) according to TNM-6 in this study. Furthermore, M1a tumours according to TNM-5 and 6 were categorised as N+ as most patients with a M1a tumour had a distal tumour with coeliac lymph nodes which can be considered N+ according to TNM-7. Pathologic tumour stage was assessed for stage distribution, or if not available, clinical tumour stage was noted. Patients with a cM1 or pM1 stage were classified as metastatic and all other patients as non-metastatic.

2.2. Treatment

For non-metastatic patients, neoadjuvant chemoradiotherapy was defined as chemoradiotherapy followed by surgery. Definitive chemoradiotherapy was defined as chemoradiotherapy without a surgical resection as the intention of chemoradiotherapy was not registered during the study period. An endoscopic resection was defined as a local tumour excision, endoscopic mucosal resection or an endoscopic submucosal dissection.

Download English Version:

<https://daneshyari.com/en/article/8439616>

Download Persian Version:

<https://daneshyari.com/article/8439616>

[Daneshyari.com](https://daneshyari.com)