East Versus West

Differences in Surgical Management in Asia Compared with Europe and North America

Tomio Ueno, MD, PhD[a,*], Michihisa Iida, MD, PhD[b], Shigefumi Yoshino, MD, PhD[b], Shigeru Takeda, MD, PhD[b], Hisako Kubota, MD, PhD[a], Masaharu Higashida, MD, PhD[a], Yasuo Oka, MD, PhD[a], Atushi Tsuruta, MD, PhD[a], Hideo Matsumoto, MD, PhD[a], Hiroaki Nagano, MD, PhD[b]

KEYWORDS

- Gastric cancer • D2 lymph node dissection • Adjuvant therapy
- Surgical management

KEY POINTS

- Gastrectomy with a modified D2 lymphadenectomy (sparing the distal pancreas and spleen) has increasingly gained acceptance as a preferable standard surgical approach among surgeons in the East and the West.
- Despite growing consensus significant differences still exist in surgical techniques in clinical trials and clinical practices secondary to variations in epidemiology, clinicopathologic features, and surgical outcomes among geographic regions.
- D2 lymphadenectomy is the standard in Japan, with exceptions.
- S-1 is the most standard adjuvant chemotherapy used in Japan after curative resection.

INTRODUCTION

Gastric cancer is an aggressive disease that remains the fifth most common type of cancer.[1] It is the second most common cancer in Asia, with more than half of the world's gastric cancer cases arising in Eastern Asia. In Western countries, most patients with gastric cancer have advanced-stage, unresectable disease at presentation,

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[a] Department of Digestive Surgery, Kawasaki Medical School, 577 Matsushima, Kurashiki, Okayama 701-0192, Japan; [b] Department of Gastroentelogical, Breast and Endocrine Surgery, Yamaguchi University Graduate School of Medicine, 1-1-1 Minami-kogushi, Yamaguchi 755-8505, Japan

* Corresponding author. Department of Digestive Surgery, Kawasaki Medical School, 577 Matsushima, Kurashiki, Okayama 701-0192, Japan.

E-mail address: tommy@med.kawasaki-m.ac.jp

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which contrasts with Eastern countries, such as Japan and South Korea, where an established national screening program permits frequent diagnosis of early stage disease.[1] In addition, most of Asia's cases are predominantly located in the distal part of the stomach,[2] whereas in the West there is an increasing frequency of these tumors in the proximal portion of the stomach.

Although clinicopathologic presentations of gastric cancer are known to vary widely between Eastern and Western countries, including histology, tumor location, and stage at presentation, it remains unclear whether these factors account for differences in survival. Survival outcomes differ considerably between Eastern and Western populations, with better overall survival reported in Eastern series.[3] Many authors have sought explanations for this finding based on the following: stage migration, differences in tumor biology, or differences in treatment.[4]

Surgical treatment differs in that extended lymph node dissection is routinely practiced in Asian countries,[5,6] resulting in greater lymph node retrieval. Whether this leads to stage migration or to a direct therapeutic effect has yet to be resolved. Furthermore, adjuvant therapy differs between the two regions.

In this article comparisons are made between the Japanese Gastric Cancer Treatment Guidelines 2014 (version 4; J-guidelines)[7] and the National Comprehensive Cancer Network (NCCN) Clinical Practice Guidelines in Oncology (NCCN Guidelines) Gastric Cancer Version 2.2016, to elucidate differences in surgical treatment and adjuvant therapy.

HISTORY OF THE JAPANESE CLASSIFICATION OF GASTRIC CARCINOMA AND THE JAPANESE GASTRIC CANCER TREATMENT GUIDELINES

In 2010, the Japanese Gastric Cancer Association (JGCA) published new versions of the Japanese Classification of Gastric Carcinoma (J-classification) and the J-guidelines.[7,8] The primary aim of the revision was to integrate a different understanding concerning the terms D1 and D2 between Japan and Western countries, and to provide an updated guide to the diagnosis and treatment of gastric cancer for clinicians and researchers worldwide. English editions are available on the Web site for free. The following descriptions were cited from a paper by Sano and Aiko,[9] who detailed the history of the J-classification and the J-guidelines.

The first edition of the J-classification was published in 1962 to standardize the surgical and pathologic documentation of gastric cancer. At that time, the Union for International Cancer Control (UICC) and the American Joint Committee on Cancer had not yet established a staging system for gastric cancer. Since then, the JGCA has made periodic revisions and expanded the J-classification into an original comprehensive guide covering all aspects of the diagnostic and therapeutic procedures for the disease, ranging from the handling of resected specimens for pathologic investigation to the extent of lymphadenectomy. Documentation using these guidelines has become standard in Japan to record all cases of gastric cancer in hospital databases in accordance with the J-classification. The first English edition of the J-classification published in 1981 is still referred to as a reference (number 95) in the section involving lymph node dissection, even in the latest NCCN guidelines.[10]

In 2001, the JGCA launched the first edition of the J-guidelines apart from the J-classification. The primary aim of the J-guidelines was to provide general and specialized clinicians with knowledge concerning standard treatments, based on evidence where available, and consensus; the purpose was to offer a patient with gastric cancer standard treatments anywhere in Japan. Because novel treatment modalities and novel handling of clinical issues are constantly being proposed in Japan, the