

D2 Gastrectomy course for low volume surgeons

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Abstract

We designed a two-day multidisciplinary course to update practicing surgeons in Canada with the current guidelines for the management of gastric cancer and improve upon the D2 LND technique. The course was modelled after successful gastric surgery courses in the United Kingdom, Sweden, Korea, and Japan. The curriculum included a 2-day short course comprised of didactic lectures and a hands-on training component in a technical skills simulation laboratory. Three international experts in gastric cancer from Japan, Korea and the United States were invited to provide course participants with insight on the D2 LND technique. Feedback from the course was very positive.

Description of the course

We designed a two-day multidisciplinary course to update practicing surgeons in Canada with the current guidelines for the management of gastric cancer, as well as to improve upon the D2 LND technique. The course was modelled after successful gastric surgery courses in the United Kingdom, Sweden, Korea, and Japan.¹⁴ The curriculum was comprised of didactic lectures and a hands-on training component in a technical skills simulation laboratory. The course was held in Toronto, Ontario and participation in the course was limited to experienced surgeons in Canada who performed >5 gastrectomies annually. Because of the low volume of gastrectomies in Canada, >5 surgeries was deemed as sufficiently high volume, according to the distribution of gastric surgeries in Ontario.⁹ Three international experts in gastric cancer were invited to provide course participants with insight on the D2 LND technique: Dr. Takeshi Sano, department director of Gastroenterological Surgery at the Cancer Institute Hospital in Tokyo, Japan; Dr. Woo Jin Hyung, Professor at the Department of Surgery at Yonsei University College of Medicine in Seoul, South Korea; and Dr. Roderich Schwarz, medical director of Indiana University's Health Goshen Center for Cancer Care, Indiana, United States. Ms. Natalie Halsband of the University of Toronto's Faculty of Medicine's Continuing Professional Department provided administrative support. The itinerary for both days is described in detail in Figure 1.

Day one of the course was composed of a series of faculty lectures in the management of gastric cancer and attendance was open to all interested persons, including all surgeons participating in the two-day course. Lectures covered a breadth of subjects such as endoscopic resections, considerations for chemotherapy and radiation therapy, and multidisciplinary considerations for gastroesophageal junction (GEJ) cancers. We partnered with the patient advocacy group, My Gut Feeling, where the founders of the organization and survivors of gastric cancer gave a voice to the patients' perspective of disease management. Presentations from this day can be viewed at: <https://www.cpd.utoronto.ca/D2Gastrectomy/agenda-content/>

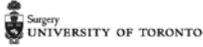
The second day of the course began with research rounds, with open attendance to all interested faculty, students and staff. At these rounds, Drs. Hyung and Sano discussed new technology for laparoscopic surgery and how to perform a D2 LND, respectively. The remainder of the day was limited to visiting faculty and participating surgeons. A select number of residents and fellows were invited to observe. The day continued with interactive lectures from all three-visiting faculty, which incorporated mentored video-review of operations, discussion regarding anatomic considerations, and considerations specific to western patients. These discussions were very interactive, where participating surgeons had the

Introduction

In North America, gastric cancer is a rare but deadly disease, with an estimated 3,500 cases per year and 5 year mortality of only 25%.¹ Gastric cancer outcomes in North America lag significantly behind those in Asia, where the disease is more common and regularly screened.^{2,3} While much of this survival difference is due to the stage at presentation, better outcomes may be partially explained by the surgical technique utilized. When performing a gastrectomy for gastric cancer, surgeons may perform a D0, D1 or D2 lymph node dissection (LND). The D2 LND is a more extensive procedure that involves removing more lymph nodes. While performing a D2 LND is more technically demanding and requires a higher level of training and expertise, data from several western randomized controlled trials indicate that patients receiving a D2 LND have lower rates of recurrence and improved overall survival compared to those receiving a D1 LND.⁴⁻⁶

Recently, guidelines have changed in both North America and Europe, with the D2 LND now the recommended procedure for curative-intent resection in advanced gastric cancer.^{7,8} Historically, the rate of D2 lymph node dissection has been low in the North America.^{9,10}

For example, between 2005 and 2008, less than 10% of patients in Ontario underwent a D2 LND. Furthermore, our research group surveyed over 200 surgeons in Ontario and reported that gaps exist in the knowledge for optimal surgical treatment of this disease.⁹ Low incidence of gastric cancer in Canada may have contributed to the limited experience of these surgeons in advanced surgical techniques required to perform the more complicated D2 LND, as only 14% of surgeons reported performing the more rigorous procedure.^{9,11-13}






Toronto Gastric Cancer Symposium

The Multidisciplinary Care of Gastric Cancer

June 14-15, 2018

Guest Faculty

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Yonsei University Health System
Seoul, Korea
Professor, Department of Surgery,
Yonsei University College of Medicine

Takeshi Sano MD PhD
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Secretary General, International Gastric
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Roderich Schwarz MD PhD FACS
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Thursday, June 14, 2018

O&B, Arcadian Loft, 8th Floor, 401 Bay Street, Toronto

1800	Welcome Reception	Natalie Coburn, Savtaj Brar & Vanessa Palter
1830	Opening Remarks	Natalie Coburn
1900	Endoscopic Resections – Who and How?	Chris Teshima
1920	What is the Difference in Treatment in Asia?	Takeshi Sano
1950	Chemotherapy and Biologics	Christine Brezden-Masley
2010	Radiotherapy	Jolie Ringash
2035	Multidisciplinary Considerations for GEJ Cancers	Roderich Schwarz
2050	Patient Perspectives and My Gut Feeling	Ekaterina Kosyachkova & Teresa Tiano
2100	How to Improve Gastric Cancer Outcomes in Canada <i>Panel Discussion</i>	Scott Berry & Savtaj Brar <i>All presenters</i>
2130	End of Day	

Friday, June 15, 2018

Pre Lab Conference: Research Rounds
Mount Sinai Hospital Auditorium; 18th floor

0730	New Technology in Gastric Surgery-Laparoscopic RCT's, Robotics and Navigation Aids	Woo Jin Hyung
0830	The D2 Lymphadenectomy and How I Do It	Takeshi Sano
0955	End	

Wet Lab
University of Toronto Surgical Skills Centre at Mount Sinai Hospital
Mount Sinai Surgical Skills Lab, 600 University Avenue, Sub Basement 2nd floor

1000	Patient selection for the D2 LND	Takeshi Sano
1020	Considerations for Resections	Woo Jin Hyung
1050	Considerations for Western Patients	Roderich Schwarz
1120	Pitfalls and Cautionary Tales All participants may submit videos for this session	Roderich Schwarz
1200	Lunch-General Q&A Session	All mentors
1245	Cadaver Lab	All mentors
1545	Education, Research and Next Steps	Vanessa Palter
1600	How to Assess Videos-KLASS Grading, What Was Learned from the KLASS Trials	Woo Jin Hyung
1630	Who Should be Doing the D2 LND and How to Teach it to Your Residents	Takeshi Sano
1700	Wrap-up	Natalie Coburn, Savtaj Brar, Vanessa Palter
1730	End of Day	

Figure 1. Toronto Gastric Cancer Symposium Agenda

opportunity to interject and ask questions at any point. Dr. Sano reviewed a video of one of his D2 LNDs and surgeons were able to ask detailed questions about surgical technique throughout the review.

Following lunch, the second half of the day involved mentored practice of the D2 technique on cadaver models in the skills laboratory. Course participants were divided into groups of 2-3 surgeons per cadaver to practice D2 LND, while being mentored by expert instructors Drs. Sano Hyung and Schwarz. This aspect of the course provided hands-on experience in identifying the lymph node stations and vasculature. The afternoon was completed with a discussion on how to translate what was learned at the short course into practice and ideas for continued collaborative learning.

Future direction

Although the common form of learning new techniques for surgeons usually occurs over short courses, data suggests that when learning is distributed over time and in different formats, concepts are retained more durably and performance is of higher quality.¹⁵⁻¹⁷ Specifically, longitudinal coaching programs or peer-mentoring has been shown to assist surgeons in learning new skills or improving their technical proficiency.^{18,19} Keeping this in mind, we are in the process of establishing a web-based community of practice that will act as a venue for longitudinal peer-to-peer coaching. The web-based platform will provide opportunity for surgeons to view and discuss videos of gastrectomies and facilitate conversation. It will be posted onto a secure server, only accessible by course participants. The goals of this platform are to solidify the learning from the short two-day course, as well as provide a platform and community for gastric cancer surgeons to communicate and discuss questions with one another.

Conclusion

Informal feedback through conversations and emails from participants following the course was very positive. Surgeons were excited to learn from international experts and expressed interest in participating in the longitudinal learning component. We are very grateful to our international faculty who joined us from Tokyo, Seoul and Indiana, as well as to all faculty who spoke at the symposium and staff at Continuing Professional Development who made this course possible. We look forward to working together with the surgeons and creating a community to learn about gastric cancer from each other.

References

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