

Dr. Ahmad S. Ashrafi: minimally invasive esophagectomy (MIE) in Surrey Memorial Hospital (SMH) and North America

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Editor's note

Shanghai Chest Hospital 2nd International Summit of Esophageal Surgery took place on 23–24 March, 2018 in Shanghai. With the theme “The survival of patient comes first”, the summit covered a series of lectures and reports on the long-term survival of modern treatment of esophageal cancer, including a variety of surgical approaches and treatment strategies used in various regions to manage the cancer in order to lay the groundwork for the future development of esophageal cancer treatment in China. At the conference, *SHC* was honored to have invited Dr. Ahmad S. Ashrafi from Surrey Memorial Hospital, Canada to have an exclusive interview to share the status of minimally invasive esophagectomy (MIE) at his hospital and North America (*Figure 1*).

Expert introduction

Ahmad S. Ashrafi, MD, FRCS(C) currently serves as the attending thoracic surgeon and intensivist at Surrey Memorial Hospital, Surrey, Canada. His research interests include minimally invasive Ivor-Lewis esophagectomy, transhiatal esophagectomy, thoroscopic lobectomy, re-do anti-reflux surgery, critical care medicine and so forth.

In 2008, Dr. Ashrafi established and introduced advanced minimally invasive thoracic surgery at Surrey Memorial Hospital. Since 2009, he has been managing a comprehensive database to study qualitative outcome of MIE, thoroscopic lobectomy, and laparoscopic giant paraesophageal hernia repairs at the hospital. He designed a simulation program in 2014 for improved educational purposes. Internationally, he has gained several medical recognitions including a Merck Frost Resident Award for Teaching Excellence in 2001 and a winner of poster presentation at Ontario Thoracic Conference, NOTL



Figure 1 Dr. Ahmad S. Ashrafi (middle) and *SHC* editors.

Canadian Association of General Surgeons Resident Award for Teaching Excellence in 2008.

Interview

SHC: Can you briefly introduce us to the history and status of MIE in your hospital and North America?

Dr. Ashrafi: MIE was first performed by myself in 2006. After moving to Surrey Memorial Hospital in British Columbia in 2008, I have started practicing MIE, which is now the standard operation there. Our surgeon team is made of four members who all do MIE. While taking different approaches, we cover all aspects of MIE, including Ivor-Lewis, modified McKeown and Transhiatal. In North America, the operation has been adopted slowly. However, more and more centers around North America are currently performing esophageal resection by MIE.



Figure 2 Interview with Dr. Ahmad S. Ashrafi (1).
Available online: <http://www.asvide.com/article/view/25408>

SHC: *What are the short- and long-term outcomes of MIE at your hospital?*

Dr. Ashrafi: The short-term outcome at our hospital is good and is comparable to major international studies and publications. Our mortality rate or death rate from MIE is in low single digit, which is an excellent result. My own record of 30-day mortality is about 2%, which is in keeping with that of other major centers. In analyzing long-term outcome, we have been tracking our patients' cancer-free survival and quality of life, but have not yet obtained all data for publication. Intermediate analyses show that our numbers are good to excellent. Patients are with good quality of life, whereas low death rate and acceptable or comparable cure rate are what we are currently looking for.

SHC: *What is the main approach of MIE at your hospital?*

Dr. Ashrafi: The main approach we use is Ivor-Lewis. We do modified McKeown and Transhiatal too, but the most commonly performed procedure is Ivor-Lewis. In our team, all of us perform all different types of MIE. Three out of four primarily do Ivor-Lewis. One surgeon does more anastomosis in the neck and the other three in the chest. Looking at the whole group, the highest number of MIE performed in the last 10 years would definitely be Ivor-Lewis.

SHC: *What are the major complications of MIE at your hospital, and how do you deal with them?*

Dr. Ashrafi: The complications of MIE can be divided into early and late ones as well as those that are life-threatening

and those that are easy to manage. The most lethal complication that causes most deaths and ICU admissions is respiratory failure usually as a result of pneumonia. We deal with them by early diagnosis, which is the most important component of managing complications. The research shows that complication rate can be fairly comparable between different centers, but what matters is how you deal with them. We have a strong team of very well-trained nurses, nurse practitioners and other physicians who look after these patients carefully. To deal with infection, we start using antibiotics early even with low degree of suspicion. Patients having the symptoms of arrhythmia in a regular ward would be transferred to a higher level of monitoring so they can be watched closely. To us, the key to success is early recognition as well as aggressive and proper management of these problems.

SHC: *Are there currently any important trials or studies taking place in your hospital or North America?*

Dr. Ashrafi: The study that our hospital is now working on aims to improve survival and reduce complications. We compare the outcomes brought by different surgeons and approaches with an aim to look at surgical mortality, cure rate, early and late complications and length of stay, as well as to track the longer-term problems and outcomes. In some other centers, I heard of a trial in multi-modality therapy called "Top Gear" that is going on at the moment.

SHC: *Other than this current study, are you planning for any other studies on MIE?*

Dr. Ashrafi: We are currently conducting a randomized study looking at an application that I developed. The app is designed with an aim to teach residents, fellows and junior surgeons how to prepare for an MIE. The trial is taking place in different resident groups who will or will not use the app to see if it facilitates them to perform MIE. The study is primarily held at our center, but once it is completed, we will share the app with other thoracic surgeons around the world to get their feedbacks on how they find it useful and what their results are.

For more information about this interview, please check out the video (Figure 2).

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(Science Editor: Brad Li, Silvia L. Zhou, SHC, shc@amegroups.com)