

# Dr. Douglas Mathisen: management complications after tracheal surgery—the earlier the intervention, the better the outcome

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## Editor's note

At the 6th Oriental Congress of Thoracic Surgery (OCTS 2019) in Shanghai, Dr. Douglas Mathisen (*Figure 1*), from Massachusetts General Hospital, gave impressive presentations on the two topics—“Management complications after tracheal surgery” and “Postintubation tracheal stenosis—the MGH experience”, sharing his experience on tracheal surgery. During the congress, with the great honor, we took this opportunity to interview Dr. Douglas Mathisen.

## Expert's introduction

Douglas J. Mathisen, MD.

Division of Thoracic Surgery, Massachusetts General Hospital, Boston, MA, USA.

Dr. Mathisen recently stepped down after 25 years as the Chief of the Division of Thoracic Surgery and Visiting Surgeon at the Massachusetts General Hospital, Boston, MA. He is the Distinguished Hermes C. Grillo Professor of Surgery at Harvard Medical School.

He received his medical degree from the University of Illinois College of Medicine in 1974 and was AOA. He was a general surgery resident and cardiothoracic resident at the Massachusetts General Hospital from July, 1974 to December, 1982. He spent 2 years in the Surgery Branch of the National Cancer Institute of Health, Bethesda, Maryland. He spent 6 months at the Western Chest Hospital, Southampton, England, during his general surgery residency. He joined Massachusetts General's Thoracic Surgery unit in 1984.

At the MGH he has been Chief of Thoracic Surgery from 1994 to 2019, Chief of Cardiac Surgery 2007–2011, and Program Director in Cardiothoracic Surgery 1995–2018. He was a previous member of the Physicians Organization Executive Committee, Board of Directors and General Executive Committee. He has been the Director or Co-Director of a highly successful Postgraduate Course



**Figure 1** Dr. Douglas Mathisen.

in Thoracic Surgery since 1985. Dr. Mathisen received the Distinguished Service Award from the Society of Thoracic Surgeons at the 2014 Annual Meeting. He is an Honorary Member of the European Society of Thoracic Surgery, Honorary Member, Society for Cardiothoracic Surgery in Great Britain and Ireland and Honorary Member, Canadian Association of Thoracic Surgeons.

## Interview (*Figure 2*)

**SHC:** Could you please briefly introduce your speech on “Management complications after tracheal surgery”?

**Dr. Douglas Mathisen:** The best thing I can say about complications is to avoid them. So you need to be fully versed in all of the technical aspects of the operation, to work on the management. That's ultimately the most important thing. There are complications that do occur after tracheal surgery. You have to be aware of them. You have to have a high degree of suspicion. And if you suspect a complication, you must address it. You can't hide from it, because the earlier you intervene, the better the outcome. And each individual complication has at its root in the importance of securing the airway. So first and foremost, it is the ability to secure the airway. Because if patients lose the airway, then they may lose their life. So everything



**Figure 2** Interview with Dr. Douglas Mathisen: management complications after tracheal surgery—the earlier the intervention, the better the outcome (1).

Available online: <http://www.asvide.com/watch/33017>

should be directed for the serious complications to secure the airway. And once you've done that, you can figure out what to do beyond that.

**SHC:** *About postintubation tracheal stenosis, according to your experience, do you have some suggestions for young surgeons?*

**Dr. Douglas Mathisen:** The first thing is to be aware of the possibility of a postintubation stenosis, anybody who had a tracheostomy in the last three months and appears with shortness of breath, you must think of stenosis as the underlying cause. It could be other things, but first and foremost you should assume that. The second most important thing is to manage the airway of patients who come in respiratory distress. It's an emergency and you need to understand the pitfalls of inappropriate interventions. Best done in a controlled setting. Best done in the operating room. Best done with the cooperation of nurses and anesthesiologist. And the next important thing is to understand how to secure the airway. Once you have the airway secured, you have another number of options. You could dilate for postintubation stenosis. Then you have to make some decision if you need a more permanent solution to their airway, which could be a tracheostomy, a T-tube, or in some cases the reoperation. If you think there's a sufficient chance that you could reoperate, I would tend to avoid a tracheostomy or T-tube and would manage patient with serial dilation on a regular basis, not waiting till the patient becomes so symptomatic that their airways are at risk. I usually would like to wait for three to six months

after a failed operation. And then, careful evaluation of the patient to make sure all comorbidities are under control.

**SHC:** *Do you think what is the biggest challenge in your work on thoracic surgery?*

**Dr. Douglas Mathisen:** The biggest challenges are that the trajectory of thoracic surgery increasingly goes to more minimally invasive procedures. There will always be a need for people to understand how to do open operations. There are big operations that are better done in an open fashion. So I think people would be well advised to do things both with robotic way and open way. I would say one of the biggest challenges is understanding the role of technology of minimally invasive surgery. You would be full hearted to explore robotic and minimally invasive surgery, because that is the future. And you have to be a part of it, especially as a young surgeon.

**SHC:** *Why did you choose thoracic surgery as a career?*

**Dr. Douglas Mathisen:** For me it was a difficult choice because I like everything I did. When I was a young resident, I enjoyed every service. I was the last in my group of residents to decide what to do. I had the good fortune of my last two rotation before I left to the national institute of health for two years of research after my third year of training to spend one month on the cardiac service and one month on the thoracic service. And suddenly I made the decision easily. I enjoyed those services. And those people in the field of thoracic surgery helped me to decide what to do. They were my mentors, teachers, ultimately my colleagues and friends. I'd like to be like those people. I think that's true among many surgeons. They're influenced by the people they work with and I've never regretted it. In my opinion, I don't understand why everybody doesn't want to be a thoracic surgeon. It's the greatest specialty in surgery.

**SHC:** *What are your hobbies in your daily life?*

**Dr. Douglas Mathisen:** About hobbies, you have to have a very strict set of priorities. Most surgeons are very busy, and their work will always be the biggest priority. But it's very important to have a life outside of surgery. You have to carve out time for your family, both your spouse and your children. It's always difficult, but you need to put in the time with energy and effort to see that happens. My interests are always towards the athletic field. It was the most rewarding

thing I did. Often times I had to rearrange my schedule. It's one of the beautiful things on thoracic surgery. Patients generally understand you even if you have to call them and say can I move your operation to a different day to accommodate some events of my children? And it is the most rewarding thing for me to have a close relationship with my children and my wife. As for my hobby, the first one is family travelling. I travel a lot. I also like to play golf. I like to have a boat on a lake. I like to go to the lake and swim and ride around the boat. Those are my main hobbies. Reading is my another hobby. I would recommend young surgeon to find time to read. It's a great escape from what you do. I usually get up much earlier than my family, so time in the morning is usually devoted to reading my favorite magazine, reading the newspaper or continuing to read my book. And I carry a book with me everywhere I go.

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1. Liu X. Interview with Dr. Douglas Mathisen: management complications after tracheal surgery—the earlier the intervention, the better the outcome. *Asvide* 2019;6:332. Available online: <http://www.asvide.com/watch/33017>

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