

Dr. Raymon H. Grogan: transoral endocrine surgery

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Editor's note

The focused issue “*The Management of Thyroid Tumors in 2020 and Beyond*” edited by Drs. Jonathon Russell and Jeremy Richmon is going to be released in *Annals of Thyroid (AOT)* in the coming months. This issue aims to review the state-of-art in the management of thyroid pathology, to provide a venue for original research focused on remote access or minimally invasive thyroid management and to review the success at extending proven management strategies into new geographic regions. Taking this opportunity, we have done a series of interviews with the authors discussing the highlights of their articles and sharing their experiences or stories in this field.

Dr. Raymon H. Grogan is a specialist in endocrine surgery with a general surgery training background. He is also involved in translational research. In addition to having expertise in the traditional surgical approaches to the thyroid, parathyroid, adrenal, and endocrine pancreas diseases, he is one of only a few experts in the United States on Transoral Endocrine Surgery. It is such an honor for *AOT* to interview Dr. Grogan on his programs, and his thoughts on transoral endocrine surgery and eligibility for transoral endoscopic thyroidectomy vestibular approach (TOETVA).

Expert's introduction

Dr. Raymon H. Grogan (*Figure 1*) is a specialist in endocrine surgery with a general surgery training background. In addition to having expertise in the traditional surgical approaches to the thyroid, parathyroid, adrenal, and endocrine pancreas diseases, Dr. Grogan is one of only a few experts in the United States on transoral endocrine surgery, a novel approach to surgery for both thyroid and parathyroid disease that leaves no visible scar. While on faculty at the University of Chicago Dr. Grogan was the first surgeon to perform this operation in the Midwest. He subsequently moved to Baylor College of Medicine in Houston and became the first surgeon in Texas to perform transoral endocrine surgery. He is now chief



Figure 1 Raymon H. Grogan, M.D., MS, FACS.

of endocrine surgery at Baylor St. Luke's Medical Center where he continues to run a busy endocrine surgery clinical practice and is growing the Transoral Endocrine Surgery program.

In addition to being a full-time clinical surgeon, Dr. Grogan is also involved in translational research. He has a Master of Science with a focus on epidemiology and biostatistics. He is the principal investigator and founder of the North American Thyroid Cancer Survivorship Study. Through this work, Dr. Grogan has published several novel findings related to thyroid cancer survivorship and has helped start a national discussion on ways to improve the quality of life in these patients.

Interview

AOT: You are running an established translational research program. Could you briefly introduce this program?

Dr. Grogan: As you know I recently moved to Baylor College of Medicine in Houston, Texas where I am in the process of establishing a new multi-disciplinary Endocrine

Surgery Research Program along with my surgical colleague James Suliburk. Our concept for the Baylor Endocrine Surgery Research Program is based on the successful program I was a part of at the University of Chicago.

At the University of Chicago I was the director of the Endocrine Surgery Research Program. That research program was a collaborative effort that included surgeons, basic scientists, epidemiologists, endocrinologists, and pathologists. The entire group was very collaborative and worked well together with the ultimate goal being to improve care of patients with endocrine surgical diseases. Our research group published on a wide-range of topics, but all within the field of endocrine surgery. Meaning the majority of our papers were focused on disease of the thyroid, parathyroid, adrenal, and endocrine pancreas. Some of our more widely read papers dealt with topics such as long-term survival rates in papillary thyroid cancer, the increasing incidence of papillary thyroid cancer, and decreases in quality of life experienced by thyroid cancer patients. Our group was one of the first research groups to point out specific issues that are associated with decreases in quality of life after a diagnosis of papillary thyroid cancer.

AOT: Do you work on other programs in your research field?

Dr. Grogan: Recently much of my research time has been focused on transoral endocrine surgery. Even though these operations have been shown to be safe in international data and international case series, there is still work to be done to show that this is a viable option in the United States. Our collaborations with colleagues like Jonathon Russell at Johns Hopkins and Insoo Suh at UCSF have been vital to the success of these new research endeavors.

AOT: You are one of the first surgeons to perform transoral endocrine surgery in the United States. Could you tell the readers what the particular setbacks and successes you've encountered when you started this approach?

Dr. Grogan: I have been fortunate in that I have worked in very forward-thinking institutions that have given me some leeway to help introduce transoral endocrine surgery into the United States. Much of the work we have done so far would not have been possible without the support of visionary surgical leaders like Jeffery Mathews at the University of Chicago and Todd Rosengart here at Baylor.

I would say the biggest success so far is the response from the patients that have had this operation. I myself would not be a believer in this approach if it were not for the response of my patients. What I mean is the patients who have had transoral endocrine surgery for the most part have given me overwhelmingly positive feedback, and this is what keeps me motivated to continue to prove the value of transoral endocrine surgery.

But proving the value of transoral endocrine surgery to the broader medical community is possibly also the biggest setback. Anytime a new surgical procedure is introduced, its value has to be proven, and that is an appropriate part of surgical innovation. However, because transoral endocrine surgery is so unusual at first glance, it seems to me that in its beginning phases it evoked a stronger negative reaction from the medical establishment than it would have if the approach was not so anatomically unusual. In addition to its unusual anatomy, there is also a history of "scarless" thyroid procedures being introduced in the United States that have subsequently failed for one reason or another. I think the combination of these two things have made it difficult for people to objectively evaluate the value of transoral endocrine surgery. And I think that is unfortunate because I do believe this operation has merit. The fact that this operation is spreading more rapidly world-wide than any previous "scarless" or minimally invasive approach is a testament to that idea.

AOT: Why do you say needing to prove that transoral endocrine surgery has value is a setback?

Dr. Grogan: I say proving its value is a setback only because the concept of value, or lack thereof, is really one of the main factors keeping transoral endocrine surgery from spreading more rapidly. I think the concept of value with this procedure is helpful because when you speak about value in regards to a surgical procedure that concept encompasses many facets of the procedure. There is clinical value, i.e., reduced complications, reduced pain, reduced length of stay, better clinical or cancer outcomes; there is monetary value, i.e., does it save money or time or hospital resources; and then there is patient-centered value, i.e., is there a benefit that patients get from the new procedure versus the old procedure other than clinical or monetary. Patient-centered value can take the form of improved satisfaction, improved quality of life, improved self-esteem, decreased worry, decreased anxiety, etc. Patient-centered value can be hard to define, hard to quantify, and hard to

prove, but in my opinion that is ultimately what is going to make or break this operation.

AOT: What, in your opinion, is the current state of transoral endocrine surgery in the United States?

Dr. Grogan: Transoral endocrine surgery, in my opinion, in the United States currently sits squarely in this space where it shows promise and has the potential to change many people's lives for the better, but it is still sitting on the sidelines so to speak, because many people are not yet convinced of its value. Until it is widely accepted as being valuable by both the medical community and patients, it will struggle to gain a foothold.

AOT: In the focused issue "The Management of Thyroid Tumors in 2020 and Beyond", you have contributed an article with Dr. Insoo Suh and Dr. Jonathon Russell on "Eligibility for TOETVA". Could you briefly introduce to the readers what is TOETVA and talk about how many people may be candidates for this operation?

Dr. Grogan: Yes of course. TOETVA is the technical acronym for the most successful transoral approach to taking out the thyroid to date. It stands for TOETVA, and is the approach that was first described in cadavers by our colleagues at Johns Hopkins, and then modified to be a viable surgical approach in patients and subsequently popularized by Angkoon Anuwong who works in Bangkok, Thailand. In the TOETVA approach there are three endoscopic ports that are placed into the space between the lower lip and the front teeth (this is the oral vestibule), and then tunneled between the skin and mandible down to the central neck. From that point on it is basic laparoscopic instruments and techniques that are used to remove the thyroid. The approach is most commonly done without the use of the robot, however there are groups who have shown success with a robotic version of the operation. Essentially, we are taking everything we have learned from laparoscopic surgery innovation over the last several decades and applying it to thyroid surgery. I personally prefer using the term transoral endocrine surgery or TES because it is a more generic term that can be used to discuss a whole range of procedures. The term TES encompasses both TOETVA and transoral endoscopic parathyroidectomy vestibular approach (TOEPVA) (the same approach only for parathyroidectomy), laparoscopic and robotic, as well the transoral approach to remove lymph nodes in the neck,

and is adaptable to any new procedure that might arise in the future.

In terms of eligibility, when we first started performing TOETVA in the United States one of the critical questions that arose was how many people might actually be eligible to have this approach. There were some surgeons who suggested that it was only a very small minority of patients who would actually be eligible for the transoral approach because it does have limitations to what can be done through the small incisions, and if it was severely limited in scope, then it might not be worthwhile to introduce into the United States. I had a rough idea that it was not as small as some were proposing, but at the same time it was not really clear to me how many people would actually be eligible. There was no definitive number to point to in conversations, and this bothered me because I felt similarly that if this technique was severely limited in scope then the effort needed to popularize it probably was not going to be worth it. So, after talking about this with my colleagues Jon Russell and Insoo Suh, we realized it would be fairly simple to figure out the answer, and surprisingly no one had ever done the work to show it before. So, we set up a small multi-center research study to find out that number. I know I personally had been estimating that about 25% of people in my clinics would be eligible for the procedure, so I was surprised when the number came back at 56%. We estimate that means somewhere around 140,000 people per year in the United States are eligible for this scarless approach to the thyroid and parathyroid. With numbers like that you can begin to see how even a small increase in a single patient's quality of life can have a big impact on a broader population level. Once I knew that number, and combined that with the positive feedback I kept getting from my own patients, I realized that this operation truly has merit and was something worth promoting.

AOT: Are there any last points you would like to highlight about transoral endocrine surgery?

Dr. Grogan: As I have said previously, I do believe this operation has merit, and I do believe there is a positive impact on patients, and I personally have seen those positive outcomes. Having said that, even though we have a lot of safety and efficacy data accumulated internationally, it is now up to the surgeons who believe in this operation to definitively prove that it is safe, effective, and has value here in the United States. I think at the end of the day, if those three things cannot be proven, then perhaps the operation

will not survive, but if we can definitively prove those three things, then it is likely that one day this operation will be the standard of care for those patients that are eligible, and it is possible that future generations of surgeons and patients will not even blink an eye when the word transoral is mentioned along with thyroid.

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