

# HANDS-ON SEMINAR IN YAMAGATA

January 14-15, 2024

# 12<sup>th</sup>

*Moderator*

**Seiji Kakehata  
Tsukasa Ito**

*Faculty*

Adrian James [Canada]

Davide Soloperto [Italy]

Marco Bonali [Italy]

Shin-ichi Kanemaru [Japan]

Kishiko Sunami [Japan]

Ryusuke Hori [Japan]

Yu Matsumoto [Japan]

Kunio Mizutari [Japan]

Masaya Uchida [Japan]

Rie Kanai [Japan]

Yohei Honkura [Japan]

Masahiro Takahashi [Japan]

**Program • Abstract  
プログラム • 抄録集**

# 12<sup>th</sup> EES HANDS-ON SEMINAR IN YAMAGATA

## Program

Day 1

Date: January 14, 2024 (Sun.) - Time: 8:30-17:30

Venue: Yamagata University Faculty of Medicine

### Theme: Perform TEES safely, Seven Essential Tips

Time	Agenda	Speaker	Venue
8:30-	<b>Seminar Registration</b>		CBT room
8:55-9:00	<b>Opening Remarks</b>	Seiji Kakehata (Japan)	
9:00-11:45	<b>Lecture 1~6</b>		<b>CBT room</b>
9:00-9:30	<b>Lecture 1</b> Let's get started with TEES	Adrian James (Canada)	CBT room
9:30-10:00	<b>Lecture 2</b> Management of bleeding and use of powered instruments for TEES	Marco Bonali (Italy)	
10:00-10:20	<b>Lecture 3</b> Looking back to when I was a TEES beginner	Kishiko Sunami (Japan)	
10:20-10:35	<b>Break</b>		
10:35-10:55	<b>Lecture 4</b> Tips for safe and secure TEES	Yu Matsumoto (Japan)	
10:55-11:25	<b>Lecture 5</b> Looking back to when I was a TEES beginner	Davide Soloperto (Italy)	
11:25-11:45	<b>Lecture 6</b> How to learn or teach TEES	Kunio Mizutari (Japan)	
11:55	<b>Group Photo Time</b>		Lecture Room 5
12:00-13:00	<b>Sponsored Symposium</b> <b>(Nobelpharma Co., Ltd.)</b>	Rie Kanai (Japan) Shin-ichi Kanemaru (Japan)	Lecture Room 5
13:15-17:30	<b>Hands-on: 3D Model Dissection</b> <b>Lecture 7</b>		<b>Communication center</b>
13:15-13:45	<b>Demonstration</b>	Seiji Kakehata (Japan) Tsukasa Ito (Japan)	Main Hall
13:45-16:00	A course: Hands-on		Main Hall
	B course: <b>Lecture 7</b> (Video seminar)	Tsukasa Ito (Japan)	Meeting Room
16:00-17:30	A course: <b>Lecture 7</b> (Video seminar)	Tsukasa Ito (Japan)	Meeting Room
	B course: Hands-on		Main Hall

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## Program

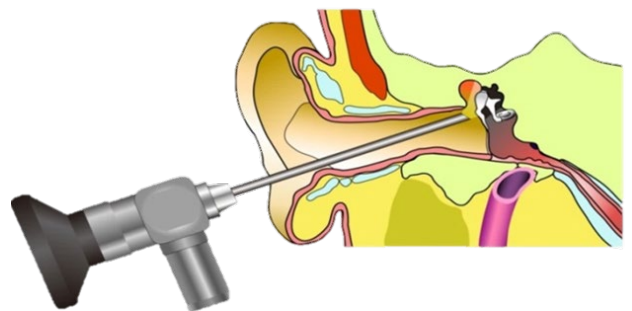
Day 2

Date: January 15, 2024 (Mon.) - Time: 8:30-16:00

Venue: Yamagata University Faculty of Medicine

**Theme: Perform TEES safely, Seven Essential Tips**

Time	Agenda	Speaker	Venue
8:30-	<b>Seminar Registration</b>		CBT room
8:55-9:00	<b>Opening Remarks</b>	Seiji Kakehata (Japan)	CBT room
9:00-16:00	<b>Live Surgery</b> Surgery 1. Pars flaccida cholesteatoma Surgery 2. Chronic otitis media		CBT room
16:00-	<b>Closing Remarks</b>	Seiji Kakehata (Japan)	CBT room





## Perform TEES safely: Seven Essential Tips

1. Let's get started with TEES

Adrian James (Canada)

2. Management of bleeding and use of powered instruments

for TEES

Marco Bonali (Italy)

3. My journey with TEES: Early days and recent improvements

Kishiko Sunami (Japan)

4. Tips for safe and secure TEES

Yu Matsumoto (Japan)

5. Looking back to when I was a TEES beginner

Davide Soloperto (Italy)

6. How to learn, how to teach TEES

Kunio Mizutari (Japan)

7. Fundamental techniques for TEES &

Tips for type 1 tympanoplasty for chronic otitis media

Tsukasa Ito (Japan)

## Sponsored Symposium

Lecture I. The methods of eardrum regenerative therapy

Rie Kanai (Japan)

Lecture II. The future of eardrum regenerative therapy

Shin-ichi Kanemaru (Japan)

## Let's get started with TEES



**Adrian James**

Department of Otolaryngology –  
Head & Neck Surgery  
The Hospital for Sick Children  
Canada

### **Abstract**

Getting started with transcanal totally endoscopic ear surgery (TEES) can seem daunting at first. Those of us who have spent many years operating on ears with a microscope have relied upon the use of two hands to achieve our objectives. The transition to operating in the ear with only one hand, while the non-dominant hand controls the position of the endoscope can be difficult. For those new to otology, opportunities to learn TEES are often limited, especially if our supervisors have preferred to use a microscope.

Steps that can be taken to overcome these challenges and prepare for successful endoscopic ear surgery will be presented. This starts with acquisition of some appropriate equipment but fortunately much of the essential equipment may already be available. It is important to set up the operating room ergonomically, for example with monitors visible comfortably. Next, appropriate cases for straightforward TEES surgery must be selected, and tips to do so will be suggested. During this course, many techniques that help make the surgery easier will be presented. Nevertheless when starting, it is important to be patient, and remember that the more we do, the easier it eventually becomes. Knowing that the lessons you learn from this course will help you become good at it will help you along this journey!

## Management of bleeding and use of powered instruments for TEES



### Marco Bonali

Department of Otolaryngology  
- Head and Neck Surgery  
University Hospital of Modena  
Italy

#### Abstract

Transcanal exclusive endoscopic ear surgery requires the management of the endoscope and the surgical instruments in a narrow space.

Bleeding in the external auditory canal is one of the most challenging issues, especially for beginners in this technique. The management of bleeding in EES is feasible using widely available hemostatic agents in reasonable frequency.

We conducted a study to investigate into the management of bleeding in EES. We aimed to assess the severity and occurrence of bleeding and describe strategies to control the bleeding during endoscopic ear surgery. We hypothesize that bleeding is reasonably controllable in this approach. Moreover we would give an instructional overview on how to manage bleeding, according to our experience.

Another important aspect of the endoscopic approach is represented by some powered instruments, that can help surgeons to overcome some obstacles due to the one hand technique.

We provide here a brief description about the ways of application of several tools and skills that are very useful in our experience to have better results and in a safer way, during endoscopic ear surgery approaches.

## My journey with TEES: Early days and recent improvements



**Kishiko Sunami**

Department of Otolaryngology  
Head and Neck Surgery  
Osaka Metropolitan University  
Japan

### **Abstract**

In this session, I would like to show you how I progressed my journey with TEES from relatively simple to more difficult cases. My first endoscopic ear surgery was for a case with dislocated ossicles after trauma. This was an ideal first case for my transition from MES to TEES, because the ear was not inflamed and the incudostapedial joint was already dislocated. The bleeding was easy to manage, and I did not have to worry about damaging stapes. I then progressed to operate for chronic otitis media, adhesive otitis media and cholesteatoma. I'll also contrast and highlight how I improved my operation in more recent cases by paying more attention to aspects including the size of the initial incision for clear vision, the right monitor setting for good peripheral view and checking the ventilation route to prevent recurrences.

## Tips for safe and secure TEES



**Yu Matsumoto**

Department of  
Otorhinolaryngology, Tokyo  
Metropolitan Police Hospital  
Japan

### **Abstract**

In the past decade, Transcanal Endoscopic Ear Surgery (TEES) has received attention as a viable alternative to conventional microscopic surgery, offering patients several benefits such as smaller incisions, faster recovery time, and reduced pain. However, with the advent of new surgical techniques, medical accidents may occur. The lecture focuses on the essential knowledge and skills to help beginners perform TEES safely. The talk covers preoperative evaluation and approach selection, bleeding control, surgical field maintenance, and accurate surgical procedures.



## Looking back to when I was a TEES beginner



**Davide Soloperto**

Modena and Reggio Emilia  
University  
Italy

### **Abstract**

The gold standard of ear surgery has traditionally been a microscopic transcanal or transmastoid approach.

Despite that, in recent years there has been an increasing trend in the use of the endoscope for several middle ear pathologies. Many advantages are related with the use of the endoscope, especially for the possibility of “looking around the corner” and magnification of the anatomical details.

Endoscopic ear surgery should be practiced by all otosurgeons to manage several intraoperative conditions and training should started during residency program, in combination with the use of the microscope.

## How to learn, how to teach TEES



**Kunio Mizutari**

Department of  
Otolaryngology, National  
Defense Medical College  
Japan

### **Abstract**

In this lecture, I would like to discuss what training is best for acquiring the skills necessary for TEES. First of all, what I want to understand most is that the basic techniques for otologic surgery are the same whether we are performed under a microscope or an endoscope. Specifically, the most important thing is to create a surgical field of vision that allows one to observe the operation site clearly. To obtain a clear surgical view, it is necessary to have proper bleeding control, put skin and mucosal incisions in appropriate locations, and perform sufficient bone removal. Among these procedures, bone removal can be learned through a temporal bone model dissection, and skin incision and mucosal incisions can be learned through a cadaver dissection course. However, it is impossible to learn bleeding control through these "off-the-job training." In particular, in TEES, which requires one-handed surgery, it is impossible to hold the suction in the left hand, so more precise bleeding control is required than in microsurgery. In this lecture, I would like to specifically present how I usually teach young doctors about these essential surgical techniques from the instructor's perspective.

## VIDEO SEMINAR

### Fundamental techniques for TEES & Tips for type 1 tympanoplasty for chronic otitis media



**Tsukasa Ito**

Department of  
Otolaryngology, Head and  
Neck Surgery, Yamagata  
University Faculty of  
Medicine, Yamagata,  
Japan

#### **Abstract**

Transcanal endoscopic ear surgery (TEES) has a number of advantages, including a wide field of view, higher magnification, and less invasiveness. However, TEES is principally a one-handed surgery and a keyhole surgery via the external auditory canal (EAC). To overcome these issues and perform TEES safely, surgeons should learn the fundamental techniques of TEES using specialized instruments for TEES. In this video seminar, I will demonstrate how to use an endoscope with surgical instruments in a coordinated manner within the narrow ear canal and I will demonstrate which instruments to select and manipulate during TEES.

In addition, tips for type 1 tympanoplasty for chronic otitis media with perforation will be presented in this seminar. To improve the success rate of surgical outcomes, we have adopted three techniques for perforation closure surgery. The first tip is a wide attachment site at the anterior remnant of the tympanic membrane for the secure underlay method. The second is the anterosuperior graft fixation, introduced by Dr. Ugo Fisch, which is used to ensure graft attachment at ASQ of the tympanic membrane. The third tip is a graft supporting at hypotympanum using gelatin sponges.

TEES is very useful for these three techniques performed at anterior and inferior sites of the tympanic cavity which are challenging for microscopic ear surgery.

## Additional Video Seminar

### Personalized cholesteatoma surgery with a combination of endoscopic and exoscopic procedures

(Recording video as part of the webinar of "Otolaryngology Updates 2023: 48 Hours of Live Webinar" presented by UC Irvine, Asan Medical Center, Seoul, Korea and Universitätsklinikum Hamburg-Eppendorf-University of Hamburg.)

## The methods of eardrum regenerative therapy



Rie Kanai

Department of  
Otolaryngology, Head &  
Neck Surgery,  
Medical Research Institute,  
Kitano Hospital,  
Japan

### Abstract

Eardrum regenerative therapy (ERT), a novel treatment for tympanic membrane perforation (TMP), is composed 3 basic elements: cells from residual tympanic membrane by trimming the perforation edge, gelatin sponge as scaffolds, basic fibroblast growth factor (bFGF) as regulatory factor. This treatment doesn't require to harvest autologous tissue and can regenerate the TM similar to its original shape without cell transplantation because this treatment promotes the self-regenerative abilities. Four weeks or more after surgery, the TMP was examined. This treatment was repeated up to 4 times until complete closure of the TMPs. The overall closure rates of ERT in our hospital were 97.0% (226/233 ear) within 4 treatments. The mean air-bone gaps in 209 patients 224 ears were became within 10 dB at 250Hz, 500Hz and 1kHz, and 11dB at 2kHz.

The high success rates of TMP closure and good hearing improvement were showed following this treatment without severe complications that could affect general health status. This novel therapy which is easy, safe and low invasive, could contribute to improve the quality of life in patient with TMPs.

We introduce the basic procedure and how to follow up the patients after eardrum regenerative therapy in this lecture.

## The future of eardrum regenerative therapy



**Shin-ichi Kanemaru**

Department of  
Otolaryngology, Head &  
Neck Surgery,  
Medical Research Institute,  
Kitano Hospital,  
Japan

### **Abstract**

The world's first eardrum regenerative therapy (EDRT), a form of regenerative medicine in the field of otorhinolaryngology, became covered by health insurance in Japan on November 19, 2019. The characteristics of EDRT are that there is no scar at all, and there is a high possibility of regenerating a normal ED and achieving ideal hearing improvement with extremely little air-bone conduction difference. However, because EDRT is a regenerative treatment that has a different basis from conventional reconstructive treatments such as myringoplasty and tympanoplasty using autologous tissue transplantation, the essence of the treatment is not fully understood. It is necessary to raise awareness about the correct treatment method.

Additionally, in recent years in the field of otology, the introduction of endoscopic ear surgery has been progressing, and this trend is spreading worldwide. By using an endoscope, transtympanic tympanoplasty combined with EDRT is less invasive, faster, and provides better hearing improvement than traditional tympanoplasty. Depending on the case, it is now possible to perform not only simple ED perforation, but also chronic otitis media, tympanosclerosis, cholesteatoma, etc. without bone removal, and even cases involving conductive reconstruction. It can be said that it is fully applicable and has a wider range of applications than expected. In this lecture, I will talk about future applications of EDRT.



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