Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Editor:

Nodular goiter (NG) is a recognizable thyroid enlargement that involves excessive growth and structural/functional transformation of a region in the normal thyroid tissue. Conventional open thyroidectomy is currently the standard therapy for NG. When thyroid artery embolization (TAE) was first introduced, the main indication for this procedure was the treatment of toxic diffuse goiter (Graves disease). However, the indications for TAE have expanded in recent years and now include the management of NG.

A recent study by Yilmaz et al (1) found that TAE is safe and effective for the management of NG. However, minor complications occurred in 44.6% (25/56) of the patients, and major complications occurred in 3.6% (2/56) of the patients. It is worth noting that blurred vision occurred in 1 patient during the procedure. There is no doubt that the occurrence of blurred vision was due to nontarget embolization.

In China, TAE for the management of toxic diffuse goiter was first reported in 1992 in an animal study (2). In 1994, the first clinical use of TAE for the management of toxic diffuse goiter was reported (3). After that initial study, TAE became increasingly popular for the management of toxic diffuse goiter. Between 1994 and 1999, 2000 and 2005, 2006 and 2010, 2011 and 2015, and 2016 and 2020, a total of 12, 153, 127, 101, and 70 articles regarding TAE were published in China, respectively. However, the use of TAE has recently been abandoned in China because analyses have found that many patients died of nontarget embolization during these procedures (4,5).

We believe that many issues need to be investigated before TAE is widely used for the management of NG. First, the appropriate indications for TAE are still unclear; thus, we do not know which cases are suitable for treatment with TAE. Second, various agents can be used for embolization, such as absorbable gelatin sponge particles, particulate agents (eg, polyvinyl alcohol), spherical agents (eg, Embospheres), and glues (eg, *n*-butyl cyanoacrylate and Onyx). However, we do not know which agent is most appropriate for use in TAE procedures, especially since most particulate embolic agents must be mixed with iodinated contrast medium to be visible during the administration. Preventing embolic agent reflux during the administration is also difficult. This is a crucial issue, since the reflux of embolic agents during the administration can lead to cerebral infarction or blurred vision. Finally, the degree of embolization needed for patients with NG is not yet clear (ie, it is unclear how many thyroid arteries should be embolized).

A better understanding of these issues is needed to find the right balance between TAE and standard therapy for patients with NG.

AUTHOR INFORMATION

Z.J.'s Email: jiazhongzhi.1998@163.com

None of the authors have identified a conflict of interest.

REFERENCES

1. Yilmaz S, Habibi HA, Yildiz A, Altunbas H. Thyroid embolization for nonsurgical treatment of nodular goiter: a single-center experience in 56 consecutive patients. J Vasc Interv Radiol 2021; 32:1449–1556.
2. Li JM, Zhang WQ, Zhao YT. Thyroid artery embolization in the management of hyperthyroidism. Zhong Hua Shi Yan Wai Ke Za Zhi 1992; 9: 165–166, Chinese.
3. Zhang XG, Hua YW, Li JY, Zhao Z. A new method for thyroidism with interventional embolism. Medical Journal of Beijing Military Region 1994; 1:11–13.
4. Gao BL, Zhao W, Huang J, Xiang S, Li L, Li M. Analysis of complications in thyroid arterial embolization for hyperthyroidism caused by Graves' disease. J Intervent Radiol 2006; 15:457–459, Chinese.
5. Yang JJ, Yuan M, Tian JM, et al. Prevention and treatment of complications for thyroid-arterial embolization. J Intervent Radiol 1994. Chinese.

Interventional Radiology Board Examination Experience in Saudi Arabia during COVID-19

From: Almamoon I. Justaniah, MD, IR/DR
Basim A. Felemban, MBBS
Fares Garad, MBBS
Bandar O. Safar, MD
Department of Radiology (A.I.J)
King Faisal Specialist Hospital & Research Centre (Gen. Org.) – Jeddah
P.O. Box 40047, Jeddah 21499, Saudi Arabia
Interventional Radiology Department (B.A.F)
AlNoor Specialist Hospital, Makkah, Saudi Arabia
Division of Vascular and Interventional Radiology
Department of Medical Imaging (F.G.)
Prince Sultan Military Medical City
Riyadh, Saudi Arabia; and
Radiology Department (B.O.S)
King Faisal Specialist Hospital & Research Centre – Riyadh
Riyadh, Saudi Arabia

Editor:

The COVID-19 pandemic has affected medical education considerably. To maintain social distancing, virtual meetings and conferences replaced in-person teaching. It became apparent that in-person examinations needed to be canceled, postponed, or conducted virtually. In Saudi Arabia, the Interventional Radiology (IR) fellowship is a 2-year program. Trainees take the oral and written certifying examination at the end of the fellowship. With the ongoing pandemic, the Saudi Commission for Health Specialties (SCFHS) along with the IR Board transitioned the examination to a virtual platform to allow the candidates to graduate while maintaining the essential component of the examination.

The number of examiners was reduced from 8 to 4. The testing was conducted on topics including; (*a*) vascular diseases, (*b*) nonvascular interventions, (*c*) interventional oncology, and (*d*) embolization. In addition, the examination was shortened from 16 cases in 120 minutes to 8 cases

https://doi.org/10.1016/j.jvir.2021.10.022

Table. Candidate Response to the Examination Questionnaire

Question	Score
The overall virtual examination experience was good	57.1% (4) agree 28.6% (2) strongly agree 14.3% (1) neutral
The time allotted was sufficient	57.1% (4) agree 42.9% (3) strongly agree
The examination contents covered what I have learned	42.9% (3) strongly agree 28.6% (2) agree 28.6% (2) neutral
The questions format was clear	57.1% (4) strongly agree 42.9% (3) agree
The examination interface was easy to navigate	42.9% (3) agree 28.6% (2) strongly agree 14.3% (1) neutral 14.3% (1) disagree
The examination instructions were clear	57.1% (4) agree 42.9% (3) strongly agree
The examination support team was helpful	57.1% (4) strongly agree 28.6% (2) agree 14.3% (1) neutral
I did not experience any technical difficulty during the examination	28.6% (2) strongly agree 28.6% (2) agree 28.6% (2) disagree 14.3% (1) strongly disagree
I prefer the online format over the conventional one for future examinations	57.1% (4) neutral 14.3% (1) agree 14.3% (1) disagree 14.3% (1) strongly disagree
My anxiety level was under control during the examination	57.1% (4) disagree 28.6% (2) agree 14.3% (1) neutral
The examiners were fair	85.7% (6) strongly agree 14.3% (1) agree

in 60 minutes. Each case had 3 competencies; approach, management, and safety. One point was given to each fulfilled competency. The passing score was set to 16 out of 24. Seven eligible candidates were tested from their homes. Zoom was used as the examination platform. A preliminary mock link was sent a week in advance to familiarize the examiners and candidates.

The examinations were monitored by the SCFHS, who were responsible for confirming the candidate's identity, performing a 360 degrees room check, and recording the entire examination. The candidate remained in front of the camera during the entire examination and cell phone use was prohibited.

To obtain feedback and assess candidates' satisfaction, a questionnaire was sent to all the candidates using Google Forms. Their response was recorded using a 5-point Likert scale (Strongly agree, agree, neutral, disagree, and strongly disagree). All candidates responded to the 11 questions detailed in the Table.

Although this was a de novo experience for the Saudi Arabian IR Board, more than 70% of candidates agreed or strongly agreed that their overall experience was good. In addition, they responded positively to 8 out of 11 questions. The majority were satisfied with the allotted time, and the inclusiveness and fairness of the examination questions and examiners. However, about half of them had technical difficulties, and the majority were anxious during the examination and do not prefer the online format for future examinations.

Experience with virtual platforms has grown in the last year to cope with the COVID-19 pandemic in compliance with social distancing. Few mock virtual examinations were conducted by other specialties when the Saudi Arabian IR Board decided to go virtual in May 2020. While pilot examinations could be helpful to compare the virtual examination with the in-person one, no pilot examination was conducted due to time constraints. Despite the benefit of the virtual examination, the candidates prefer the in-person experience, which is contrary to the findings reported by Chaurasia et al (1).

As shown in our limited experience, the study illustrates that the virtual examination can serve as an alternative to the in-person one when needed. However, it might be preferable to keep the in-person examination as a default and use the virtual examination when the former is unavailable.

AUTHOR INFORMATION

A.I.J.'s E-mail: ajustaniah@kfshrc.edu.sa
None of the authors have identified a conflict of interest.

REFERENCE

1. Chaurasia AR, Page BR, Walker AJ, et al. Lessons to learn from a successful virtual mock oral examination pilot experience. Adv Radiat Oncol 2021; 6:100534.

Iliac Branch Endoprosthesis to Facilitate Transjugular Intrahepatic Portosystemic Shunt Recanalization and Splenomesenteric Reconstruction for Portal Vein Tumor Invasion

From: Russell Mark Salamo, MD
Stuart Schroff, MD
Jenanan Vairavamurthy, MD
Ramon R. Ter-Oganesyan, MD
Department of Radiology (R.M.S., S.S., J.V., R.R.T.-O.)
Keck Hospital of the University of Southern California
3380 Vinton Ave, 202
Los Angeles, CA 90034

Editor:

Portomesenteric venous occlusion can have devastating consequences, including variceal hemorrhage from portal hypertension (1). Recanalization via the use of symmetric, uniformly sized, endovascular stents has been shown to be safe and effective in patients with acute and chronic

https://doi.org/10.1016/j.jvir.2021.10.003