



Second International Conference and Workshop on Interventional Radiology 2023, Dhaka, Bangladesh: Advancements, Achievements, and Challenges

Anindita Datta¹ Bishwajit Bhowmik¹ Syed Zoherul Alam² Md Tariqul Islam³ Syeda Naheed Sultana¹

¹ Department of Radiology and Imaging, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh

² Department of Radiology and Imaging, CMH (Combined Military Hospital), Dhaka, Bangladesh

³ Department of Radiology and Imaging, Sheikh Hasina National Institute of Burn and Plastic Surgery, Dhaka, Bangladesh

Address for correspondence Anindita Datta, MBBS, MD, Department of Radiology and Imaging, Bangabandhu Sheikh Mujib Medical University (BSMMU), House 35 (Kalpa Neer), Road 10/A, Flat-A5, Dhanmondi, Dhaka-1209, Bangladesh (e-mail: aninditadatta@bsmmu.edu.bd; anindita.datta.tulu@gmail.com).

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Abstract

Keywords

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- BSVIR
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Interventional radiology, which combines diagnostic and therapeutic approaches to address and treat a variety of medical diseases, has emerged as an expeditiously developing area at the confluence of radiology and minimally invasive procedures. The authors provide a general overview of the Bangladesh Society of Vascular and Interventional Radiology (BSVIR), including its goals, contributions, and effect on the Bangladeshi healthcare sector. The second interventional radiology conference was held in Dhaka and was organized by the Bangladesh Society of Radiology and Imaging, and BSVIR, in alliance with the Indian Society of Vascular and Interventional Radiology. This allowed the exchange of ideas and innovations as well as a discussion of recent advances in this dynamic field. This manuscript also highlights the key points, emerging trends, and scientific sessions that were presented at the conference.

Introduction

Since its independence in 1971, Bangladesh has come a long way to reach its goal in the healthcare sector. Today, besides Bangabandhu Sheikh Mujib Medical University (BSMMU), there are 83 acknowledged medical colleges in Bangladesh (29 are public and 54 are private). Another six medical colleges are managed by the Bangladesh Armed Forces as well as the Ministry of Defense of Bangladesh.¹ There are 25 tertiary-level hospitals and 24 specialized hospitals in Bangladesh.² The Bangladesh Society of Radiology and Imaging (BSRI), which had its beginnings in January 1981, was registered under the Ministry of Social Welfare of the Government of the People's Republic of Bangladesh. There are currently 1,179 general and life members in BSRI.³

A group of committed radiologists founded the BSVIR (Bangladesh Society of Vascular and Interventional Radiology)

as a nonprofit professional organization in 2019 with the aim of advancing interventional radiology (IR) by facilitating the establishment of provisions for education and research in IR for healthcare professionals, to advocate widespread adoption of minimally invasive interventions to enhance patient care and to encourage professional collaboration among different healthcare organization in the country and abroad.

The BSVIR operates as a specialized section of BSRI and currently has 41 members.

No combined or national data are available for the number of IR interventions performed annually in Bangladesh, but in the case of Bangabandhu Sheikh Mujib Medical University, approximately 3,320 nonvascular procedures (tumor ablation 100/year; percutaneous biliary stenting 120/year; biopsy plus drainage 3,000/year; and port placement 100/year), and approximately 120 vascular procedures, transarterial

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chemoembolization (TACE) 80 per year, and embolization procedures 40 per year are performed annually.

BSVIR aims to raise funds and conducts activities in support of education, training, and research in IR. BSVIR is acting as a liaison for the collaboration between BSMMU, Combined Military Hospital (CMH), Dhaka Medical College and Hospital, Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders, and Sheikh Hasina National Institute of Burn and Plastic Surgery to arrange workshops and hands-on training for fellows and resident physicians on various IR procedures.

BSVIR is holding lectures, seminars, and workshops to encourage and broaden patient and healthcare professionals' access to reliable information about IR. BSVIR hosts informative seminars and social media dialogues that are open to everyone, not just healthcare professionals. Online webinars are a recent innovation for knowledge exchange between interventional radiologists and other healthcare providers on a national and international level. Distributed throughout several international health days and disease awareness days, posters, and brochures with diverse information about radiology and IR are accessible to the general public and healthcare professionals from different fields.

The Bangladesh Journal of Radiology and Imaging, the official peer-reviewed publication of BSRI, regularly publishes articles with fresh research findings, with a particular emphasis on IR.

At present, IR in Bangladesh is facing a few challenges to flourish fully. Not all healthcare professionals in different healthcare sectors are aware of the impact of IR's diagnostic and therapeutic aspects, hence referral of patients to IR is inadequate. IR is not practiced at every institution due to a lack of resources and trained interventional radiologists as well as technologists. In these circumstances, BSVIR is working to promote, develop, and integrate the practice of IR into mainstream medical practice and healthcare policies in Bangladesh and to expand access to high-quality IR services to patients.

Following the BSRI's recommendations, additional posts in the government sector were created in 2011 within the various subspecialties of radiology, including IR.³

To develop IR facilities in all tertiary and medical college hospitals in Bangladesh, to integrate IR into the undergraduate medical curriculum, and to include advanced procedures along with pre-existing basic procedures of IR in a revised curriculum for the postgraduate study of Radiology and Imaging, BSVIR along with BSRI has been collaborating closely with the Government of the People's Republic of Bangladesh, the Bangladesh Medical and Dental Council and, BSMMU, since 2019.

BSVIR is currently working with the Indian Society for Vascular and Interventional Radiology (ISVIR), the Cardiovascular and Interventional Radiological Society of Europe, the Asia Pacific Society of Cardiovascular and Interventional Radiology, and the Asian Conference on Tumour Ablation.

Such collaboration aids in the information sharing of research findings and clinical experiences as well as the training of Bangladesh's interventional radiologists in

updated and newer IR procedures through the organization of outreach programs, conferences, hands-on training workshops, and online seminars.

The first international conference was held in 2019 at Dhaka with a collaboration of BSVIR and BSRI. The coronavirus disease 2019 pandemic affected our ability to conduct additional conferences during 2020 to 2022.

The second International Conference and Workshop on Interventional Radiology was held in 2023 at Dhaka.

Conference Report

The two-day conference (13th and 14th May 2023) was organized by the BSRI and Bangladesh Society of Vascular & Interventional Radiology (BSVIR) in collaboration with the ISVIR.

The general theme of the conference was "Interventional Radiology: Current Status and upcoming opportunities in Bangladeshi healthcare." The conference's major goal was to educate healthcare professionals from various sectors on IR intervention's value in improving patient care in Bangladeshi healthcare.

Approximately 220 delegates attended the conference. Eight distinguished interventional radiologists from India, more than 200 renowned Bangladesh physicians from radiology and other healthcare specialties, and resident doctors of radiology and imaging, from Bangladesh and Nepal, participated in the conference. IR-related product manufacturers were also present to exhibit new innovative technologies and machinery.

After the official opening, a plenary session with keynote speakers and a scientific panel discussion on numerous modern IR treatment techniques were held. In parallel sessions, practical workshops and live cases were conducted concurrently at BSMMU and CMH, Dhaka, which are projected to play a vital role in the development of this new subspecialty in Bangladesh.⁴

Eminent doctors from Bangladesh and India delivered lectures at the plenary session on a variety of important themes, including general interventions, venous interventions, hepatorenal interventions, neurointerventions, and other miscellaneous interventions. Panel discussions were held between acclaimed clinicians from various specialties, focused on multidisciplinary approaches in the treatment of critical disease conditions and the integration of IR procedures in different clinical settings.

On day 1, 14 speakers in five sessions delivered lectures on a variety of important themes, including general interventions, venous interventions, hepato-renal interventions, neuro-interventions, and other miscellaneous topics.

Session one featured critical biopsy and management of its complications, slide preparation and preservation of biopsy material, the role of IR in the management of breast lesions, biliary intervention, and why should you be an IR.

The second session began with a lecture on central venous catheterization and chemo-port, followed by management of dialysis access, management of deep venous thrombosis, and approach to vascular anomalies.

The third session featured the management of portal hypertension, transjugular intrahepatic portosystemic shunt, portal vein embolization, ablation of hepatic and renal tumors, and Budd-Chiari syndrome.

Neurointerventions, stroke therapy, and management of cerebral arteriovenous malformations and aneurysms were discussed in the fourth session.

The fifth session included a lecture on fetal intervention, percutaneous sclerotherapy of vascular lesions, lung tumor ablation, and ablation of thyroid lesions.

On the second day, TACE, uterine fibroid embolization, management of post-partum hemorrhage, IR management in acute limb ischemia, bronchial artery embolization, management of acute bleeding, and IR management of acute trauma were discussed.

Hands-On Workshops and Live Cases

The hands-on workshops and live cases included tumor ablation, biopsy procedures, TACE, percutaneous transhepatic biliary drainage, breast intervention, stroke management, central venous catheters, peripherally inserted central catheter, and chemotherapy port insertion. Live cases of hepatic tumor microwave ablation and TACE of hepatocellular carcinoma were also showcased.

Scientific Poster Presentation

The conference featured several scientific posters that provided experts and researchers with an opportunity to discuss their original research and conclusions. The topics included Mammotome—a revolutionary device for breast biopsy, percutaneous transhepatic biliary drainage, breast intervention, microwave ablation, biopsy, and routine breast intervention procedures. Other posters displayed were antegrade double J uterine stenting, bilateral inferior petrosal sinus sampling, IR in acute stroke management, and chemo-port.

Collaboration between BSVIR and ISVIR

The partnership gives interventional radiologists from Bangladesh and India a forum for exchanging knowledge,

skills, and best practices. In the future, joint initiatives would make it easier to get access to high-quality educational materials, mentorship, training, fellowships, and research opportunities, allowing Bangladeshi practitioners to keep up to date with the most recent developments in the industry. A standard guideline for IR practices in both nations would be greatly aided by this collaboration. And, the two societies' cooperation would promote a sense of regional solidarity.

Conclusion

In Bangladesh, the progress of image-guided minimally invasive therapy practice has been significantly aided by the BSVIR. Its promotion and expansion are expected to benefit the country's larger population. BSVIR is looking forward to advancing research, and open-access publication while offering IR professionals courses and training in innovations and methods for free or at a reasonable cost. We want to extend our reach beyond our traditional membership to help other medical professionals including nurses and sonographers who are under-supported in IR. Bangladesh's society has a great opportunity to influence the future direction of healthcare in the country. Additionally, the partnership between the BSVIR and ISVIR would have a positive synergistic effect that would benefit both societies and advance IR in Bangladesh.

Conflict of Interest

None declared.

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