



Editorial

Women in Interventional Radiology

Jenny M. Gandhi¹

¹ Department of Neurovascular and Peripheral Vascular Intervention Radiology, Shalby Hospital, Surat, Gujarat, India

J Clin Interv Radiol ISVIR 2023;7:73–74.

Interventional radiology (IR) is an incredibly rewarding and exciting specialty. It entails surgical interventions performed through a pinhole, which, unlike an open surgery, is done without any large incisions or stitches. Many innovative technologies and devices are used for routine as well as critical life-threatening clinical conditions. Most IR procedures are performed under local anesthesia or conscious sedation on a daycare basis. It enables treatment of patients who are otherwise unfit for surgery under general anesthesia, thereby reducing their hospital stay, as well as overall morbidity and mortality.

Despite the possibility of a productive career, women are under-represented in IR across the world and in India. Women represent only 11% of IR consultants in the United Kingdom, 34% in the United States, and 3.5% in India. However, it must be noted that half of the medical students in the world are women. It is projected that women will account for the majority of health service doctors in the next decade.¹ Any medical subspecialty field that is not attracting women is missing out on many talented and capable members. In fact, recent studies have shown that patients treated by female physicians live longer and have fewer readmissions than patients who are treated by male physicians.^{2,3} Women have a lot to offer, specifically on IR therapies directed to women and pediatrics, in addition to all other IR therapies.

Lately, there has been much excitement on how to attract more women to the field of IR. IR should be appealing to women looking for a career with innovative procedures, longitudinal patient care, and an opportunity to make a difference in people's lives daily. However, the risk of radiation exposure particularly during reproductive years, myths about the stressful work-life, and perceived belief of lack of work-life balance have made the IR subspecialty less attractive to prospective female trainees. The aim of this editorial is to dispel the "myths" and "misconceptions" about IR that have developed over the years and to encourage more women to join IR.

There are several hurdles a woman faces in any male-dominated medical career and so in IR. Medical students are not aware of the IR specialty during their medical school training. It is impossible to expect someone to choose a specialty they do not even know exists. Hence, medical students should be exposed to IR during their early clinical rotations. Symposiums, educational sessions, and didactic lectures should be provided for medical students to showcase the amazing outcomes that interventional radiologists can accomplish. Students should be guided for career opportunities in IR and the steps for the entry process so that they can make informed decisions.

In India and a majority of the countries of the world, the pathway to enter in IR is after completion of training in diagnostic radiology. The percentage of women in diagnostic radiology is approximately 32.35% in contrast to less than 3.5% in IR.⁴ During diagnostic radiology training, many female residents are demotivated from pursuing a career in IR due to the lack of opportunities and the biased opinion of more radiation exposure. They also consider the risk to fertility, emergency duty hours, and difficult work-life balance; hence, they are encouraged to choose alternative non-IR radiology subspecialty. Active mentorship from practicing interventional radiologists irrespective of their gender is essential to encourage female radiology trainees to choose IR. At the same time, female IR role models are the need of the hour. Moreover, alternative integrated training programs of diagnostic and IR should be encouraged where students can directly opt for IR after medical school. The selection criteria should be based on an objective exam and an interview to reduce gender bias in the selection process. Additionally, every trainee should be given an equal opportunity for training in IR irrespective of his/her gender.

Fear of radiation exposure, risk of infertility, and work during pregnancy are major concerns for women practicing IR or who want to pursue a career in IR. Data suggests that the overall occupational radiation exposure to interventional

Address for correspondence
Jenny M. Gandhi, MD, DNB
Radiology, FVIR, FNVIR,
Department of Neurovascular and
Peripheral Vascular Intervention
Radiology, Shalby Hospital, Surat
395009, Gujarat, India
(e-mail: drjennygandhi98@gmail.
com).

DOI <https://doi.org/10.1055/s-0043-1768628>.
ISSN 2457-0214.

© 2023. Indian Society of Vascular and Interventional Radiology. All rights reserved.

This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial-License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Thieme Medical and Scientific Publishers Pvt. Ltd., A-12, 2nd Floor, Sector 2, Noida-201301 UP, India

radiologists is similar to that of the natural background radiation.⁵ IR can be practiced safely during pregnancy without significant radiation risk to the developing fetus, with reported radiation doses far below the recommended guidelines.⁵⁻⁷ Despite this, misinformation about radiation exposure is prevalent and is particularly damaging when imparted by fellow radiologists. There are incidents where female interventional radiologists have been prevented from performing IR procedures in the cathlab once they declared pregnancy. This can be demoralizing to the individual and can lead to undue work pressure on male colleagues. Ultimately, this results in a negative attitude toward women interventional radiologists. Hence, the perception of “occupational radiation exposure is dangerous” must be dispelled. When precautions are followed and as low as reasonably achievable guidelines are applied, the risk to individual is negligible.

Striking a work–life balance in IR is important, as it is with any other career that demands long and emergency working hours. It is essential to have a supportive and understanding life partner, children, and family, who encourage and support women in IR. Flexible working hours should be allowed in needy times. Work schedules should be adjusted and arranged to allow every staff member to leave the hospital on time on particular days of the week to accommodate personal and family responsibilities. Stress and emergencies related to family are part of every individual’s life and should be respected. A happy and fulfilled career is complementary to a stable, happy, and content family life.

As of now, the leadership of training programs, voluntary organizations, and societies of IR are dominated and represented by men. This may be due to the culture of the specialty and lack of mentoring for female interventional radiologists. The leadership of an organization reflects its membership. Societies should be more inclusive of female members and should offer various leadership positions to deserving candidates, so that they become more visible within the societies and at various national and international academic events. There should be an initiative to create a wing of “Women in IR (WIR).” WIR can share their stories to represent the

importance of woman in the field and can attract more women into IR. Raising the profile of women at the national and international level will certainly send the message that women are a critical part of the IR community.

IR is an exciting and rewarding medical specialty offering innovative and life-saving treatments for many critical diseases. As the medical science is growing, the need of IR will also increase. In many developed as well as developing countries, there is shortage of IR physicians. Recruiting women will be the key to increase the number of IR practitioners worldwide. There is no good reason why women should not enter into IR and have a successful career, without limits. So, the time has come for us to look beyond our unconscious biases and give deserving women the same opportunities that have traditionally been reserved for men in IR and embrace women into the specialty.

References

- 1 Royal College of Physicians Women and medicine. The future: summary of findings from Royal College of Physicians research. Accessed April 15, 2023 at: https://www.rcr.ac.uk/sites/default/files/RCP_Women_%20in_%20Medicine_%20Report.pdf
- 2 Tsugawa Y, Jena AB, Figueroa JF, Orav EJ, Blumenthal DM, Jha AK. Comparison of hospital mortality and readmission rates for Medicare patients treated by male versus female physicians. *JAMA Intern Med* 2017;177(02):206–213
- 3 Wallis CJ, Ravi B, Coburn N, Nam RK, Detsky AS, Satkunasivam R. Comparison of hospital mortality and readmission rates for Medicare patients treated by male vs female physicians. *BMJ* 2017;359:j4366
- 4 Piper CL, Scheel JR, Lee CI, Forman HP. Gender Trends in Radiology Authorship. *Gender trends in radiology authorship: a 35-year analysis. AJR Am J Roentgenol* 2016;206(01):3–7
- 5 Marx MV, Niklason L, Mauger EA. Occupational radiation exposure to interventional radiologists: a prospective study. *J Vasc Interv Radiol* 1992;3(04):597–606
- 6 Niklason LT, Marx MV, Chan HP. Interventional radiologists: occupational radiation doses and risks. *Radiology* 1993;187(03):729–733
- 7 Ghatan CE, Fassiotto M, Jacobsen JP, Sze DY, Kothary N. Occupational radiation exposure during pregnancy: a survey of attitudes and practices among interventional radiologists. *J Vasc Interv Radiol* 2016;27(07):1013–1020.e3