

Commentary: Improving training in retina in Indian residency programmes

Retinal diseases have become a significant cause of low vision in every part of the world than had previously been thought. Blindness surveys underestimate the prevalence of blindness caused by retinal pathologies due to lack of routine dilated fundus examinations. Most of the irreversible blindness is caused by retinal disorders like age-related macular degeneration (AMD). The incidence of diabetic retinopathy and its devastating complications will increase as the prevalence of diabetes is increasing rapidly. The posterior segment complications of anterior segment surgeries will increase due to high numbers of cataract, glaucoma, and refractive surgeries performed everywhere.^[1] Blindness can be avoided as most diseases are preventable or treatable if diagnosed at appropriate time. Thus, we need proper exposure and good training in retina during ophthalmology residency or subspecialty fellowships to prepare them for facing future challenges.

Basic understanding of common retinal diseases like diabetic retinopathy, retinal detachment, AMD, venous occlusions, endophthalmitis, etc. should be inculcated in minds of young ophthalmologists through well-defined curriculum. They should be trained comprehensively to diagnose, investigate, and manage these common retinal disorders. They should also be made aware of recent developments/innovations in retina like advancements in retinal imaging, newer anti-VEGF agents and role of artificial intelligence in retinal disorders. The resident should be able to screen and diagnose common retinal diseases at the end of his/her residency. This will lead to early diagnosis and referral to retina specialists if necessary. Patient counseling, communication, and ethics should be given special emphasis in residency curriculum as it remains an important

aspect in managing retinal diseases.^[2] Holistic management including optimization of systemic co-morbidities should be taught during residency training.

The resident should be well versed in doing basic clinical procedures like direct ophthalmoscopy, indirect ophthalmoscopy, 90D slit lamp biomicroscopy, and scleral indentation if possible. Recent studies have shown that these skills are inadequate in residents. One of the reason is lack of feedback as the teacher is unaware of what the resident sees, limiting opportunity for refinement. To overcome this difficulty, several alternate methods of demonstration like virtual indirect ophthalmoscope, model eyes, and virtual reality computer simulations such as the EYESi ophthalmoscope, (VRMagic Holding, Mannheim, Germany) have been developed.^[3] These help in building confidence and improves examination skills.

The resident should be competent enough to detect potential vision threatening emergencies such as retinal tears and detachments. They should be aware of the basics of retinal imaging like OCT, fluorescein angiography, ultrasonography as well as advances like ultra-widefield imaging. It will be heartening if they learn basic laser procedures such as pan retinal photocoagulation or sectoral lasers. These are compulsory skills which have to be learnt during residency training in western countries.^[4-6] Competency in incisional vitreoretinal surgeries is not expected from residents. With the advent of digitally assisted vitreoretinal surgery like Ngenuity, multiple residents/fellows can learn the basics of surgery by seeing surgery of experts at the same time. New vitreoretinal surgery virtual reality simulators like Eyesi can serve as a platform to learn and improve surgical skills.^[7] The resident should be confident to perform intravitreal injections or vitreous tap in various conditions like endophthalmitis.

The present study has highlighted the high variation of exposure in the subspecialty of retina in residency training

programs in India.^[8] This can be linked to lack of standardized curriculum, limited number of faculties trained in retina subspecialty and lack of equipment (imaging and surgical) due to limited resources especially in government setups. Need of the hour is to implement a basic uniform curriculum like ACGME in USA, which should be feasible and affordable. This should include proficiency in knowledge about common retinal diseases and examination skills which are must to practise retina. Advances can be taught in workshops or conferences which should be given due importance. There should be scope for research, critical analysis, and patient communication.^[2]

Atul Kumar, Divya Agarwal, Shreya Nayak

Dr. Rajendra Prasad Centre for Ophthalmic Sciences,
All India Institute of Medical Sciences,
New Delhi, India


Correspondence to: Dr. Atul Kumar,
Retina Services, Dr. Rajendra Prasad Centre for Ophthalmic
Sciences, All India Institute of Medical Sciences, Ansari Nagar,
New Delhi - 110 029, India.
E-mail: atul56kumar@yahoo.com

References

1. Retinal Diseases and VISION 2020. Community Eye Health 2003;16:19-20.
2. Narayanan R, Gupta SR, Honavar SG. Fellowship training in India: How to produce leaders? Indian J Ophthalmol 2018;66:1671-2.
3. Sridhar J, Shahlaee A, Mehta S, Rahimy E, Garg SJ, Finklea BD, *et al.* Usefulness of structured video indirect ophthalmoscope-guided education in improving resident ophthalmologist confidence and ability. Ophthalmol Retina 2017;1:282-7.
4. Scott IU, Smalley AD, Kunselman AR. Ophthalmology residency program leadership expectations of resident competency in retinal procedures and resident experience with retinal procedures. Retina Phila Pa 2009;29:251-6.
5. Chan WH, Saedon H, Falcon MG. Postgraduate ophthalmic training: How do we compare? Eye 2011;25:965-7.
6. Chadha N, Liu J, Maslin JS, Teng CC. Trends in ophthalmology resident surgical experience from 2009 to 2015. Clin Ophthalmol Auckl NZ 2016;10:1205-8.
7. Deuchler S, Wagner C, Singh P, Müller M, Al-Dwairi R, Benjilali R, *et al.* Clinical Efficacy of simulated vitreoretinal surgery to prepare surgeons for the upcoming intervention in the operating room. PLoS One [Internet] 2016;11:e0150690.
8. Gogate P, Biswas P, Das T, Nirmalan P, Natarajan S. Ophthalmology residency training in India: Comparing feedback about how the training equips ophthalmologists to combat retinal diseases. READS report #6. Indian J Ophthalmol 2019;67:1816-9.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online

Quick Response Code:	Website:
	www.ijo.in
	DOI: 10.4103/ijo.IJO_1441_19

Cite this article as: Kumar A, Agarwal D, Nayak S. Commentary: Improving training in retina in Indian residency programmes. Indian J Ophthalmol 2019;67:1819-20.