

Commentary: Teleophthalmology is a different ball game for kids

Playing doctor with children

Working with kids and clinically examining children is difficult, while a proper ophthalmic examination is even more difficult. Besides the obvious difficulty in getting a reliable history, one needs special skills and a kid-friendly personality to do a complete pediatric eye examination.

Pediatric ophthalmology outpatient departments are often specially designed with pictures, toys, entertainment, treats and play areas to put the children at ease so that parents and doctors can cajole the kids to allow a good eye examination. Some doctors disguise their instruments with dolls and toys to make the children comfortable. It is already difficult and time-consuming to do a clinical examination for children, and doing that over teleophthalmology will definitely be several times more difficult.

Changing the rules of the game

With the COVID-19 pandemic and the lockdown closing down regular outpatient departments, teleophthalmology has come to the rescue. The vulnerable pediatric population and the elderly have been advised not to go out even with the relaxation of the lockdown. Proper teleophthalmology requires trained personnel (often an optometrist) with refraction and eye examination equipment on the patient's side. Photo slit lamps and fundus cameras are used to send clinical images to the ophthalmologist, while vision, refraction and intraocular pressures are measured by the skilled personnel with specialized equipment.

The lockdown changed the rules of teleophthalmology because, without the equipment and skilled personnel, the ophthalmologist does not get much information to confirm a diagnosis or start treatment. Managing with what they have,

they can only use video calls and photos, which can help in some diagnosis and not others.

The only remaining option

Though it is in no way a replacement for direct examination, teleconsultation is here to stay. Despite teleconsultation being available for several years, the shortcomings of a teleconsultation had prevented it from having a meaningful role in ophthalmology. The lockdown led to the quick amendment of the MCI guidelines^[1] to allow a legal backing for teleconsultation. This contributed greatly to the sudden interest in this platform.

For directly connecting with the patients at home, smartphones and computers are the only gadgets reasonably expected to be available. Innovative smartphone apps such as to test visual acuity,^[2] take 9-gaze^[3] photos and help to take clinical photos^[4] are the only solutions to be quickly used.

Apps for teleophthalmology

In the accompanying article,^[5] about the experience of teleconsultation for pediatric ophthalmology, they used clinical photos in over half the cases, followed by telephonic advice and video calling. Even though several medical teleconsultation apps and services are available, video calling was by WhatsApp, FaceTime and Skype, probably because most people have one of these already installed and ready to use. Squint and ocular motility assessment need a 9-gaze photo-collage which is beautifully assisted by the 9-Gaze App.^[3] The current generation of smartphones has excellent cameras so that close-up photos and videos of the eye can be taken with good clarity if proper technique is followed.^[4] If not, a clip-on macro lens or any lens attached to the back of the smartphone should be able to give very good photos.^[6]

Reassurance and forward triage

There are several models of teleophthalmology; but in this situation, we have only the patient with a smartphone at one

end.^[7] Based on history and symptoms, teleconsultation can help to reassure those with non-urgent conditions and manage several conditions over the phone. Some postoperative reviews can also be done over teleconsultation reducing the number of hospital visits and the associated risks of travelling and exposure at this time. Most important is the forward triage – the sorting of the patients before they come to the hospital. This should prevent unnecessary potential exposure of the patients to COVID-19 at this time. But in the future, once the pandemic and lockdown will get over, this may be a means to schedule patients for the appropriate time slots and tests when they will visit the hospital.

Lessons for the future

Pediatric teleophthalmology is more difficult than pediatric ophthalmology and teleophthalmology, but it has its advantages. This pandemic has quickly pushed us into the inevitable use of teleophthalmology.^[8] Even after the pandemic and lockdown, teleophthalmology will be here to stay.

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