Date: 9/Oct/2019

Questions

Basic questions:

1. What is keratoconus diseases?
2. Causes of keratoconus disease
3. At what age it is more likely to occur?
4. How is it detected?
5. Is there any treatment for this?
6. For which diseases patient’s corneal topography is taken?
7. How many %age of patients at the hospital has this?
8. What are the early signs that require corneal topography tests?
9. Can the refractive errors be detected using topography?

Further specific questions:

1. Any disease (detection) specific to size and shape of the pupil? (since it can be segmented out from the image of cornea)
2. Treatment of keratoconus disease is corneal cross linking, whereas in the initial stage of keratoconus, is there any sort of eye therapy(exercise) which stabilizes cornea and stops further corneal deformation? (if a therapy is available, we can detect early stage keratoconus and track the improvement with regular topography?)
3. Can we comment on the **foresightedness/nearsightedness**(refractive error) by looking at the topography or external view of the eye?
4. **Amblyopia**(lazy eye or stereoacuity) can it be detected from the external image of the eye? Or does it affect the cornea or pupil?
5. Given that we can track the movement of pupil and the cornea while a person is looking at mobile phone, can we detect **conjugate gaze palsy**? Also is it a common disease?
6. In general abnormal topography can be corrected? What are the different diseases which affect topography?
7. If possible and time permits: can we see a demonstration of, a) follow-up examination of topography and corneal staining in Oculus 5M.

Date: 7/Nov/2019

Questions on Corneal Topography:

1. What is Corneal topography?
2. How do we measure corneal topography?
3. What are the measurements commonly obtained using topographer? (e.g. elevation map, axial map etc.)
4. What are the techniques for corneal topography? (e.g. Scheimpflug imaging, placido). Also, can you please suggest any book or specific papers which elaborate on these techniques (theoretical descriptions).
5. Among the above-mentioned topography techniques, which is more accurate?
6. What are the cost of different topographers?
7. What are the symptoms or patients’ complaints, which hints towards corneal abnormality?
8. What kind of deformations in the cornea are observed more often?
9. What are the causes of corneal abnormalities?
10. What are the diseases which can be diagnosed using corneal topography?
11. What are the demographics of corneal abnormality?
12. Does the size of cornea differ person to person?
13. How often the topographer is used in the hospital?
14. How likely it is to find a topographer in an eye hospital? (including small towns and rural areas)?
15. Can we comment on the refractive error in the eye by analyzing topography? (whether the person has Myopia or hyperopia)

Date: 17/Jan/2020

1. What are the symptoms or patients’ complaints, which hints towards corneal abnormality?
2. For people with normal vision, does the size of cornea differ person to person?
3. What are the different stages for Keratoconus?
4. Does the placido images has enough information to detect Keratoconus?
5. Can we use placido reflections to even measure different stages of keratoconus?
6. Are there specific reflection patterns from placido for different stages of Keratoconus? If yes, can you please show these patterns if you have it in your device?
7. How do we measure severity of keratoconus?
8. Usually topographers are used to detect keratoconus, these devices show elevation, tangential, axial maps etc. what does these maps represent?
9. Is it required to generate these heatmaps, for detection of keratoconus?
10. How does these heatmaps are calculated and read? Can you suggest a book/Doc which can help us understand optics/mathematical derivation of placido based topography calculations?
11. Being ambitious, if we successfully build placido based system for smart phones, will we get on an average 20-30 patients for each stage of keratoconus to evaluate our system?
12. If you have placido based device, can you measure topography for one of us?