



IACLE Distance Learning Program (DLP)

Phase 4 Assignment 11:

Course content covered:

E4. Contact Lens for Keratoconus

From the New IACLE Contact Lens Course (New ICLC)

ASSIGNMENT 11

Read the questions carefully and record your answers on the answer sheet template

- 1. Typically, though not always, keratoconus (KC) starts to affect people:**
 - a. In their 2nd or 3rd decade of life
 - b. Before 10 years of age
 - c. Between the 3rd and 4th decade of life
 - d. In any age group

- 2. All of the following have a strong link with KC except:**
 - a. Glandular fever
 - b. Vernal keratoconjunctivitis
 - c. Food allergies
 - d. Spring catarrh

- 3. According to Booyesen's 2003 classification, 52 - 65 D of corneal curvature and a central corneal thickness of 473 microns is:**
 - a. Mild KC
 - b. Moderate KC
 - c. Advanced KC
 - d. Severe KC

- 4. According to Rabinowitz (1995, 1998), the diagnosis of keratoconus can be based on:**
 - a. Ks > 47.2 D, inferior steepening (inf cf. sup) > 1.2 D, astigmatic axis skewed > 21°
 - b. Ks > 47.2 D, inferior steepening (inf cf. sup) > 2 D, astigmatic axis skewed > 30°
 - c. Ks > 50 D, inferior steepening (inf cf. sup) > 1.2 D, astigmatic axis skewed > 21°
 - d. Ks > 50 D, inferior steepening (inf cf. sup) > 2 D, astigmatic axis skewed > 30°

- 5. All of the following factors influence Keratoconus patients EXCEPT:**
 - a. Eye rubbing – Knuckle rubbing
 - b. Collagen disorders
 - c. Age of the mother at birth
 - d. Lower-lid pressure on the globe

- 6. In advanced KC, breaks can appear in Descemet's membrane that allow stromal imbibition of aqueous humor causing severe local corneal oedema that can be accompanied by all of the following except:**
 - a. Pain
 - b. Epithelial microcysts
 - c. Sudden decrease in vision with scarring
 - d. Diffuse stromal opacification

7. A skewed radial axis is:

- a. The angle between the steepest and flattest principal meridians
- b. The angle between the flattest radial axes
- c. The angle between the steepest radial axes
- d. The angle between the least flat and the least steep principle meridians

8. A nipple cone is defined as a:

- a. Small, central cone, less than 5 mm in diameter and very steep
- b. Paracentral cone up to 8 mm in diameter and very steep
- c. Large, central cone up to 8 mm in diameter and very steep
- d. Small, paracentral cone less than 5 mm in diameter and very steep

9. An oval cone is a cone with a:

- a. Displaced apex, mostly inferior-temporal with a diameter of 5 - 6 mm
- b. Diameter of 8 – 10 mm, para central, usually inferior
- c. Diameter of 8 – 10 mm, para central, usually superior
- d. Displaced apex and a 5 – 6 mm diameter that is easier to fit with a CL

10. Which one of the following symptoms is NOT usually associated with keratoconus?

- a. Photophobia
- b. Flare, especially at night
- c. Pain
- d. Monocular diplopia

11. All of the following are typical signs of advanced keratoconus, EXCEPT:

- a. Striae of Vogt
- b. Fleischer's iron ring
- c. Decreased visibility of the corneal nerves
- d. Corneal epithelial scarring

12. Rizzuti's Sign is the nasal image of the light from a torch directed:

- a. From the nasal side
- b. Anteriorly but not parallel to the iris plane
- c. Parallel to the iris plane and refracted by the anterior eye
- d. Tangentially towards the iris to elucidate the iris profile

13. Which one of the following statements regarding keratoconus is INCORRECT?

- a. Incidence of about 1 in 2000 in general population
- b. Onset may be earlier in females than in males
- c. Most cases present between the ages of 12 and 25
- d. Lower incidence in Asians compared with Caucasians

- 14. All of the following are desirable objectives when fitting a keratoconic cornea with CLs, EXCEPT:**
- Minimize bubble formation
 - Ensure adequate tear exchange under the CL
 - Optimize CL movement
 - Retard cone progression using apical bearing
- 15. In what percentage of cases is keratoconus believed to be an inherited corneal abnormality?**
- 6 to 10%
 - 10 to 25%
 - 25 to 35%
 - 25 to 50%
- 16. The apparent increase in the incidence of forme fruste keratoconus is largely due to:**
- Our greater understanding of the condition leading to greater vigilance
 - Newer information detailing the genetic inheritance of the condition
 - The wider use of slit-lamps with higher magnifications
 - The wider use of videokeratoscopes/topographers
- 17. Which one of the following conditions is NOT associated with keratoconus?**
- Down syndrome
 - Fuch's dystrophy
 - Marfan syndrome
 - Pseudo-xanthoma elasticum
- 18. Approximately what percentage of keratoconics eventually require some form of ocular surgery for their condition?**
- 5 to 10%
 - 10 to 20%
 - 20 to 30%
 - 30 to 40%
- 19. Which one of the following is NOT an early sign of keratoconus?**
- Distorted retinoscopy reflex
 - Apical stromal thinning
 - Asymmetric steepening of keratometry mires inferiorly or centrally
 - Widened interpalpebral aperture
- 20. Why is neovascularization of an eye after a penetrating keratoplasty undesirable?**
- Unacceptable cosmesis
 - Topographical changes may adversely affect CL behaviour
 - Active blood vessels can induce graft rejection
 - Increased risk of subepithelial haemorrhaging



- 21. Approximately what percentage of keratoconic cases presents after 40 years of age?**
- 5%
 - 25%
 - 50%
 - 85%
- 22. Following a penetrating keratoplasty, approximately what percentage of graft recipients requires CLs to achieve satisfactory vision?**
- 50%
 - 60%
 - 70%
 - 80%
- 23. The choice of CL type needs consideration of which one of the following clusters:**
- Current stage of the disease and the cone type
 - Unaided visual acuity and the patient's lifestyle
 - Cost of the type of CL, ease of fitting, and ease of use
 - Cost, CL tolerance, disease progression, visual acuity, and the patient's lifestyle
- 24. With regard to the apical bearing method of CL fitting in KC, which one of the following is NOT true?**
- Is the most successful and preferred CL fitting method used.
 - Yields good vision possibly due to corneal reshaping
 - After CL removal, vision might remain better for some time probably due to corneal flattening
 - Can result in corneal abrasions and epithelial breakdown in the bearing area
- 25. Which one of the following is true in relation to the apical clearance method of CL fitting in KC?**
- CL bears on the central cone and exhibits clearance peripherally
 - Increases the risk of central corneal scarring
 - Can result in variable vision due to uncorrected corneal astigmatism
 - Unlike an apical bearing fit, it does not produce edge seal-off
- 26. With regards to the three-point touch fitting philosophy in KC, which of the following is true? The CL touches the cornea at...**
- limbus, apex and limbus
 - base of the cone, apex and limbus
 - limbus, base of the cone and limbus
 - base of the cone, apex and base of the cone



27. Decisions regarding axial edge lift adjustments for the final CL in KC can be made:

- a. Immediately after insertion of the nearest trial CL available
- b. Only after finalizing central fit and assessing the fluorescein pattern
- c. Before applying fluorescein
- d. Just before finalising the central CL fit

28. Post-PKP CL fitting necessitates the following considerations EXCEPT:

- a. Assessment of the cornea's 'e' value and quality of the graft
- b. Assessment of the location of sutures relative to the CL
- c. Refraction and K readings
- d. Confirm minimum unaided visual acuity of 6/60 (20/200)

29. With regard to intra-stromal corneal rings, which one of the following statements is INCORRECT?

- a. They are not excellent alternatives to PKP even in scarred corneas
- b. They do not delay the need or eliminate the need for a corneal graft
- c. They produce flattening of central cornea
- d. They are an alternative to PKP if the cornea is clear

30. The disadvantages of using flat peripheral curves include all of the following EXCEPT:

- a. Foreign body sensation
- b. Increased CL movement and possible dislodgement
- c. Excessive edge lift
- d. Rapid adaptation