

## Appendix 'E'

### IN SITU CORNEAL EXCISION

(As per the procedure laid down by the International Federation of Eye & Tissue Banks).

#### Initial Preparation:-

1. Clean your hands with alcohol swab or water. Dry it.
2. Wear sterile Cap, Mask, Gown & then Gloves.
3. Open outer drape of the In-Situ / Enucleation kit.
4. Drop sterile Vati, 20-cotton tips applicators (CTA), 4x4 gauze pieces, 2 ml. Syringe. On outer opened sterile drape.
5. Pour Betadine solution into opened sterile Vati which has place on drape.
6. Take 16 CTA and dip it's one side in Vati into Betadine solution. The bulb of CTA should be fully immersed in Betadine solution.
7. By using one undipped side CTA hold lower eye lid of left eye and by using other dipped CTA sweep the lower conjunctival fornix from lateral canthus towards the nose at one time. Take care of immersed bulb of CTA should not touch to the cornea.
8. Using second dipped CTA sweep the upper conjunctival fornix of left eye from lateral canthus towards the nose at one time.
9. Repeat the same procedure for Right eye.

#### Lid Margin And Lash Preparation :-

10. By using one undipped CTA open the upper lid of Left eye and roll the margin and lashes away from the globe.
11. Use other dipped CTA to scrub the upper lid margin and lashes one time across in a circular motion for approximately 20 seconds.
12. Repeat step 10 and step 11 on lower lid of Left eye.
13. Repeat the same procedure on Right eye.

#### Globe Preparation :-

14. Fill the sterile syringe with approximately 1.5 cc of Betadine solution. Use one undipped CTA to gently roll back the upper lid of Left eye and slowly drip approximately 0.75 cc of the Betadine solution on the eye. Gently roll back the lower lid of the Left eye and slowly drip approximately 0.75 cc of the Betadine solution on the eye.
15. Repeat the same procedure for Right eye.

#### Lids And Face Preparation :-

16. Prepare the skin and facial area extending from the scalp to baseline of the nose by swabbing with folded sterile 4x4 gauze pieces dipped in Betadine solution.
17. The preparation begins at the lid margins and works in a circular pattern outward.
18. Repeat this procedure for each (Left & Right) eye two more times, (Total three times) Alternating eyes.
19. It is very important that the Betadine solution is left on the both eyes and skin for at least three to five minutes before irrigating the eyes.
20. Discard remaining Used preparation supplied in a biohazard waste container.
21. Remove sterile preparation gloves and discard them in an appropriate biohazard waste container.

#### Prepare The Sterile Field :-

22. Wash your hands and swab with alcohol pads.
23. Open the sterile eye drape taking care to avoid contaminating the sterile field being created by touching anything other than wrapper edges and placed it on it's sterile field.
24. Label MK Medium vials with eye bank no., Left or Right cornea etc. Loosen the caps to top thread and place the vials to a corner of the sterile field.
25. Place labelled containers for blood sample near the sterile field.
26. Wash your hands scrub with alcohol pads and dry it.
27. Wear next pair of sterile gloves.
28. Open the inner wrap of the instrument kit taking care to avoid contaminating gloves by contact with unsterile surface while handling the edges of the instrument wrapper.
29. Use one hand to pick up the balance salt solution bottle and other hand to pick up a sterile CTA from the sterile instrument filed.
30. Gently open the lids of Left eye with the sterile CTA, then flush the Betadine solution off the glove and conjunctiva. Be certain to irrigate off all Betadine solution.
31. Pick up other sterile CTA with the sterile hand and repeat the irrigation procedure for the Right eye.
32. Pick up the sterile 4x4 gauze with a biowipe and gently blot dry the lid of the Left eye & Right to remove excess moisture from the lid skin.
33. Carefully position the sterile bilateral eye drape on the donor.
34. Open the eyelids of Left eye using a sterile CTA and insert a solid eye speculum. (Be careful to avoid scratching the cornea with the speculum).

35. Using small clawed forceps and tenotomy scissors, lift and cut the conjunctiva at the limbus 360 degrees.
36. Any adhesion between the conjunctiva and the anterior globe is separated using blunt and sharp dissection technique to ensure that the conjunctiva is not in contact with the anterior globe within 5mm of the limbus. (it may necessary to make several relaxing cuts in the conjunctiva).
37. The exposed sclera is carefully scrapped from the limbus outward with a scalpel blade (#15) to remove all remaining conjunctiva tissue. (it is important to remove all conjunctiva flush to the limbus because the conjunctival tissue may contain microbial contaminants which should not accompany the cornea to the storage media.)
38. Use the instruments which have touched conjunctiva only for the conjunctival removal on the Right eye.
39. Use a second scalpel with a #15 blade and small clawed forceps to make an incision through the sclera 2 mm to 4 mm from the limbus and parallel to the limbus approximately 5mm in length.
40. Care must be taken to cut all the way through the sclera without perforating the choroid. As this would cause vitreous leakage which may cause collapse of the globe including the anterior chamber – this would compromise the cornea.
41. Continue the scleral incision 360 degrees using corneal section scissors (Castroviejo) and small tissue forceps to stabilize the posterior aspect of the scleral incision if necessary.
42. Take care to keep the incision parallel to the limbus and to produce an even scleral rim between 2 mm and 4 mm in width.
43. If the incision has been made properly, the corneal – scleral button should be attached to the ciliary body-choroid only at the scleral spur.
44. Complete the corneal removal by using one pair of small smooth dressing forceps to hold the scleral rim stationary and a second set of small smooth dressing forceps or an iris spatula to gently push the ciliary body – choroid downward and away from the corneal-scleral button.
45. Aqueous fluid should escape from the anterior chamber at this point assuring that the anterior chamber was indeed intact.
46. The corneal-scleral button may be rolled side to side but never pulled in such a way as to cause cornea tension.
47. Do not contaminate the cornea by allowing it to touch the eyelids or other facial skin.
48. Continue to hold the cornea by the scleral rim with the small smooth dressing forceps and aseptically transfer it to a labelled MK medium Vial.
49. Place one edge of the cornea into the medium before releasing the forceps to ensure that the cornea sinks into media and does not float on top where it may be damaged by the lid if the vial.
50. Remove the speculum and place it with the conjunctiva instruments on the mid peripheral area of the instrument field.
51. Repeat step 34 to step 50 procedure to removing Right eye cornea.
52. Gently palpate the iris and pupil of each remaining posterior segment with a blunt instrument to rule out aphakia or pseudophakia.
53. Insert eye caps in front of the remaining posterior poles and gently close the eyelids. (do not use forceps to close the lids. Use only cotton tipped applicators or gloved fingers.)
54. Discard all used disposables in a biohazard bag and all sharp in sharps container.
55. Rewrap instrument for transport, cleaning and sterilization.
56. Clean the work area with disinfectant solution.
57. Discard personal protective attire in a biohazard bag.
58. Record information about the recovery (time of recovery, recovered by etc.) on the donor recovery form and also on a form to leave in the donor's medical record to document the donation.