

Ophthalmology Surgical Competency Assessment Rubric (OSCAR)

“Ophthalmology Surgical Competency Assessment Rubrics” (OSCARs) are designed to facilitate assessment and teaching of surgical skill. Surgical procedures are broken down to individual steps and each step is graded on a scale of novice, beginner, advanced beginner and competent. A description of the performance necessary to achieve each grade in each step is given. The assessor simply circles the observed performance description at each step of the procedure. The OSCAR should be completed at the end of the case and immediately discussed with the student to provide timely, structured, specific performance feedback. These tools were developed by panels of international experts and are valid assessments of surgical skill.

OSCAR Instructor Directions

1. Observe resident performing the surgery.
2. Ideally, immediately after the case, circle each rubric description box that you observed. Some people like to let the resident circle the box on their own first. If the case is videotaped, it can be reviewed and scored later but this delays more effective prompt feedback.
3. Record any relevant comments not covered by the rubric.
4. Review the results with the resident.
5. Develop a plan for improvement (e.g. wet lab practice/tips for immediate next case).

Suggestions:

- If previous cases have been done, review OSCAR data to note areas needing improvement.
- If different instructors will be grading the same residents, it would be good that before starting using the tool they grade together several surgeries from recordings, so they make sure they are all grading in the same way.

OSCAR; Ophthalmic Surgical Competency Assessment Rubric for Pterygium Surgery

Resident: _____ Assessor: _____ Year of Training: _____ Date: _____

Surgical Step		Novice (score = 2)	Beginner (score = 3)	Advanced Beginner (score = 4)	Competent (score = 5)	Not applicable. Done by preceptor (score= 0)
1	Placement of speculum and draping	Difficult to place the speculum and application of drape. Requires assistance. Leaves most of the lashes exposed.	Places the speculum and applies drape with minimal verbal instruction. Incomplete lash coverage.	Places the speculum and applies drape without difficulty with minimally obstructing view. Lashes mostly covered.	Places the speculum very easily and applies drape not obstructing view. Lashes completely covered and clear of incision site.	
2	Limbal/corneal traction suture (if applicable)	Unable to put limbal/corneal traction suture without help Superficial sutures leading to cheese-wire Anterior chamber penetration with corneal traction suture	Limbal/corneal traction suture with minimal verbal instruction but some mistakes (i.e. small bite)	Limbal/corneal traction suture of adequate depth & horizontal bite without help	Limbal/corneal traction suture without complications and with appropriate technique	
3	Marking the site of conjunctival graft incision with marker	Unable to mark the conjunctiva with calipers or does not check the caliper setting to confirm planned action. Does not understand the discrepancy between the size of defect and of conjunctival flap/graft.	Able to mark the conjunctiva with calipers but the shape does not fit defects. Understands the discrepancy between the size of defect and of conjunctival flap/graft.	Able to accurately mark the conjunctiva with calipers but marks fade because not well prepared. Understands the discrepancy between the size of defect and of conjunctival flap/graft.	Able to efficiently and accurately mark the conjunctiva with calipers. Understands the discrepancy between the size of defects and of conjunctival flap/graft. (Takes a graft larger than the defect)	
4	Conjunctival graft dissection using sub-conjunctival fluid injection (if applicable)	Conjunctival perforation during needle insertion Unable to insert the needle at the right place leading to dissection of deep conjunctival stroma or Tenon's capsule.	Appropriate sub-conjunctival fluid injection. Conjunctival dissection without perforation using scissors but includes deep conjunctival stroma or Tenon's capsule.	Appropriate sub-conjunctival fluid injection. Prepares an intact thin conjunctival flap/graft with some verbal help.	Appropriate sub-conjunctival fluid injection. Prepares an intact thin conjunctival flap/graft without help.	

5	Conjunctival resection and dissection of the pterygium body	Cuts with difficulty without correct dissection, leaves ragged edges, tears tissues. Oversized conjunctival resection or too small leaving without removing damaged tissue.	Cuts with moderate difficulty, leaves ragged edges. Conjunctival resection still of inadequate size.	Cuts with minimal difficulty, leaves regular edges. Proper size of the conjunctival resection.	Cuts very easily dissecting smoothly. Proper size of conjunctival resection and complete removal of the pterygium body.	
6	Excision of pterygium head.	Performs partial removal with severe difficulty. Dissects pterygium at a wrong plane.	Pterygium head almost completely removed. With moderate difficulty. Not confident with the surgical technique	Pterygium head completely removed with little difficulty. Confident with the surgical technique.	Pterygium head completely removed without difficulty. Very confident surgical technique.	
7	Superficial keratectomy	Not aware of technique Incomplete abnormal tissue removal, leaves debris on the cornea and severe irregular surface. Deep stromal damage due to vigorous keratectomy.	Aware of technique Completely removes abnormal tissues but retains some superficial scars, leaving some remains in the cornea. Mildly irregular surface.	Technique – near perfect Minimal to nil bed irregularity or deep stromal damage with minimal residue on the cornea.	Completely removes abnormal tissues Creates a smooth and regular bed with minimal residual opacity.	
8	Dissection of Tenon's capsule and removal of a 2 mm strip from the conjunctival edge	Is not able to establish difference between the conjunctiva and Tenon's capsule, and dissects very deeply, distends and break tissues.	Has moderate difficulty to establish difference between conjunctiva and Tenon's capsule. Damage to conjunctiva, Tenon's removal may be insufficient or excessive.	Dissects Tenon's capsule properly with minimal difficulty. Tenon's removal is enough.	Dissects and removes Tenon's capsule easily, in enough quantity without injuring the conjunctiva or other adjacent structure.	
9	Scleral shaving and cauterization	Unable to successfully shave sclera underlying pterygium. Cauterization insufficient or excessive both in intensity and localization.	Shaves underlying pterygium with difficulty and hesitation. Cauterization slightly insufficient or excessive both in intensity and localization.	Achieves good scleral smoothness. Adequate cauterization in intensity & localization.	Precisely and deftly prepares sclera. Appropriate and precise cauterization.	

10	Mitomycin-C application (if applicable)	Not aware of indication, concentration of the drug, or duration, method and site of application (without taking care of adjacent structures, does not record time and performs insufficient washout).	Aware of indication Poor management of drug concentrations or duration, method and site of application (no time to register, no care with adjacent structures and performs moderate washout).	Aware of indication Some degree of difficulty in drug preparation, or duration, method and site of application (records the time, takes care of adjacent structures, and profuse washout).	Aware of indication Good management of drug concentrations, and duration, method and site of application (records time, special care with adjacent structures and profuse washout).	
11	Conjunctival flap/graft preparation and dissection	Not sure of size & location of conjunctival excision Perforates conjunctiva during dissection, Includes Tenon's capsule in the conjunctival flap/graft. Reverses the graft placing the epithelium down.	Size of conjunctival flap/graft is barely adequate Poor management of the instruments Thick conjunctival flap/graft containing too much stroma, tears the conjunctiva, takes care of not to reverse the graft.	Size is almost exact Good management of the instruments Prepares a very thin conjunctival flap/graft, manipulates the conjunctiva smoothly, takes care of not reversing the graft.	Measures the graft size and obtains an adequate size. Excellent management of the instruments, dissects adequately and gets one right size and right thickness graft. Prepares a very thin conjunctival flap/graft.	
12	Placing the graft in the area of pterygium excision	Places the graft over the limbus or leaves more than 2 mm uncovered sclera, does not match the limbal graft area with the limbal area of pterygium excision, places the epithelium graft down.	Places the graft at 1 mm from the limbus, does not match the limbal graft area with the limbal area of pterygium excision, places the epithelium graft down.	Places the graft at 1 mm from the limbus, does not match the limbal graft area with the limbal area of pterygium excision, places the epithelium graft up.	Places the graft at 1 mm from the limbus, matching the limbal graft area with the limbal area of pterygium excision, places the epithelium graft up.	
13	Conjunctival flap/graft suturing (with Scleral fixation)	Unable to pass episcleral suture of the flap/graft (anchoring sutures). Unable to suture the flap/graft edge to conjunctiva. Has great difficulty inserting the needle, tears tissues with forceps double 0.12 fixation teeth. Breaks suture, deforms needle.	Conjunctival flap/graft suturing with minimal verbal instruction but some mistakes (i.e. very close or very far from limbus, or inversion of conjunctival edges). Moderate difficulty. Inserts the needle after some failed attempts, may damage tissue.	Conjunctival flap/graft suturing without help. Inserts needle and second instrument on first attempt with mild difficulty, no damage to tissue.	Conjunctival flap/graft suturing without complications and with appropriate technique. Smoothly inserts instruments without damaging the tissue. Stable wound, good apposition of the donor and host tissue.	

Global indices						
1 4	Tissue handling	Is excessively aggressive or timid in manipulating tissue. Inadvertent tissue damage occurs (including significant corneal epithelium disruption).	Aware of techniques for avoidance of tissue damage and bleeding but needs supervision to accomplish proper handling. Mild corneal epithelium disruption may occur.	Tissue handling is safe but sometimes requires multiple attempts to achieve desired manipulation of tissue. Minimal corneal epithelium disruption may occur.	Tissue handling is efficient, fluid and almost always achieves desired tissue manipulation on first attempt.	
1 5	Eye Positioned Centrally Within Microscope View	Constantly requires repositioning.	Occasional repositioning required.	Mild fluctuation in pupil position.	The pupil is kept centered during the surgery.	
1 6	Technique of surgical knot tying	Unable to tie knots.	Require multiple extra hand maneuvers to make first throw lay flat and/or loosens first throw while attempting to perform the second throw.	Is able to tie a flat surgeon's knot first throw but second and third throws are inefficient. Does not inadvertently loosen the first throw.	Is able to efficiently tie a flat, square surgeon's knot.	
1 7	Handling instruments	Instruments not selected according to the procedure, holding improperly, handled roughly and with great difficulty.	Instruments properly selected, holding improperly, handled with moderate difficulty.	Instruments properly selected, properly held, with mildly difficulty.	Instruments properly selected for each procedure, handled properly and skillfully.	
1 8	Communication with surgical team	Does not know role of surgical team members. Lacks confidence or has too much. Does not establish good rapport with team. Unable to request instruments from scrub nurse using proper instrument and suture names and/or instructions to surgical assistant are vague or nonexistent.	Knows role of most surgical team members. Lacks confidence. Has difficulty establishing good rapport with team members. Able to request most instruments from scrub nurse using proper instrument and suture names but instructions to surgical assistant are inadequate to perform procedure safely.	Knows role of each surgical team member. Is somewhat confident and usually treats team with respect. Establishes good working relationship. Able to request most instruments from scrub nurse using proper instrument and suture names in correct order. Instructions to surgical assistant are adequate for a skilled assistant but inadequate for an unskilled assistant.	Knows role of each surgical team member. Is confident and treats team with respect. Establishes good working relationship. Able to efficiently request instruments from scrub nurse using proper names in correct order. Able to consistently give clear instructions to surgical assistant.	

Overall difficulty of case (circle):

Standard

Intermediate

Difficult

Comments:

Signature of Assessor: _____

Signature of Trainee: _____

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