

# Answers to Audience Questions - WSPOS World Wide Webinars

## WWW 3 – Season 2 - How To Teach Strabismus Re-Operations



Kyle Arnoldi-Jolley



Daisy Godts



Federico Velez



Jyoti Matalia



Mauro Goldchmit



David Granet



Massimiliano Serafino



*Federico Velez (FGV), Mauro Goldchmit (MG) & Jyoti Matalia (JM)*

1. When do you re-operate for residual angle for infantile esotropia?

FGV: When the patient is out of the monofixational range and can't be improved with glasses.

MG: It depends on the amount of deviation and if there is some hyperopia associated. Usually not before 6 months.

JM: Any reoperation is ideally done 6-8 weeks after the first surgery. I would personally wait for 3 months before operating again.

2. Do you prefer to operate on 4 muscle in cases of esotropia with IOOA in one session or in 2 divided sessions?

FGV: Only if I have absolute evidence of inferior oblique overelevation in adduction or reverse hypertropia and maybe if significant fundus excyclotropia in the absence of the other 2.

MG: In the presence of IOOA I always operate the horizontal deviation and the IO in the same procedure.

JM: If IOOA is present, I would weaken the IO in the same sitting. It can be done in one session as the obliques do not contribute to the anterior ciliary circulation with no risk of anterior segment ischaemia.

3. Which are your surgical plan considerations if you have an under corrected XT with the residual XT being smaller in Side gaze than in ppm?

FGV: I consider several options. Slanted procedures can manage primary position better than lateral gazes. Surgery for the RG and surgery for the LG deviations unless too small. Add or discuss that patient may need a faden type of surgery simultaneously or later. If the patient has suppression I am not very concerned. But I always look to decrease the amount of esotropia in lateral gaze

MG: Correct the deviation in PP

JM: Prefer bilateral MR resections to correct the residual XT which is lesser in the side gazes than the XT in primary position. Re-recessing the LR may result in overcorrection.

4. Do the panelists plan an imaging like UBM / OCT for planning the amount of re-surgery?

FGV: I don't

MG: No

JM: UBM/ OCT can be done if horizontal muscles were operated upon. However, in my opinion it is not of much help in planning the amount of re-surgery.

5. To find out if the operated muscles have the maximum recess, which is the method you choose: UBM, OCT or direct visualization during surgery?

FGV: Direct. All imaging modalities have limitations if large recessions were done

MG: Ductions, saccadic velocity and direct observation of the muscle during surgery.

JM: I would choose direct visualisation of the muscle during surgery. UBM and OCT gives an idea about the position of the muscle but not if the muscle is scarred, fibrosed or stretched.

6. Does everyone request their anesthesiologist to give muscle relaxant as part of GA? I think that without muscle relaxant, FDT is difficult to interpret confidently

FGV: I don't

MG: Usually no, but the patient has to be in a good level of anesthesia

JM: No. A non-depolarising muscle relaxant does not have any effect on the results of FDT so can be given during strabismus surgeries.

7. How does one hold the prism when the head is turned or tilted - at larger prism powers, important to consider Prentice vs. frontal plane position?

FGV: I use frontal plane

JM: Frontal plane position is preferred over prentice position and ensure that during the tilts the prism should be held parallel to the orbital floor.

8. Any precautions to avoid bleeding before reoperation? Topical vasoconstriction for instance

FGV: I always use vasoconstrictor regardless if reoperation or first-time surgery

MG: Topical drops for vasoconstriction, cauterizing

JM: A drop of topical brimonidine, which is a powerful vasoconstrictor can be instilled 15 mins prior to reduce bleeding from conjunctival and episcleral vessels during the surgery.

9. Any tips on surgical dosage on muscles in re-operations?

FGV: Release FDT. Think on numbers as this was the first surgery and modify accordingly for example. A MR 1 mm posterior to the equator may be too much. Advancing a previously recessed muscle is more effective in PD per mm. removing a stretch scar or a capsule is not the same as resecting

MG: Surgery on muscles previously operated acts more. I prefer adjustment under general anesthesia using forced ductions and spring-back balance tests.

JM: There is no standard protocol or set dosage for reoperations. The surgical plan in reoperations mainly depends on the type of the previous surgery, surgical dose applied in the previous surgery, the amount of residual squint and the surgeon's experience or preference.

10. Do you use Mersilene suture in case of stretched scars?

FGV: I don't use any non-absorbable sutures if the new insertion is very anterior unless I can place the knot under the muscle (between the muscle and the scleral to avoid extrusion)

MG: I have no experience

JM: Stretched scars may be usually due to poor wound healing properties of a muscle and hence it is better to use a non-absorbable suture like mersilene to reduce the risk of developing a stretched scar again.

11. What about situations with buckle?

FGV: Conjunctival scars. Scar covers the muscle both sides ocular and orbital. Strong attachments to the buckle capsule. I never remove a buckle unless the retina surgeon wants to do it or the buckle is dragging the muscle anteriorly. Leave the scleral buckle capsule intact

MG: Careful dissection of the muscle and membranes

JM: Hangback techniques are preferred in cases of squint post scleral buckle surgeries. In cases of buckle, retinal surgeons don't prefer the removal of the buckle, hence it is very important to isolate the muscles carefully keeping the buckle in place. Hangback recession allows to position the muscles properly with the buckle in place but do keep in mind that one should not exceed more than 6 mm of recession to get the best effect.

12. Do you use pull over traction suture in re-operations? Can you explain the technique?

FGV: I don't do it

MG: No

JM: I do not use it often.

Pullover suture technique is generally used in severely restricted strabismus when the muscle does not slacken enough even after recessing it. Due to this effect, the muscle gets reinserted either at the insertion or a little anterior to the insertion. To prevent this from occurring. The pull over suture technique is used wherein the eyeball is held in a direction away from the recessed muscle to keep the muscle recessed and avoid the muscle adhering to the insertion again.

You can hear Dr. Burton Kushner's lecture on pullover traction suture, which he presented at Pediatric Ophthalmology Subspecialty Day 2017 (<https://www.aao.org/annual-meeting-video/pullover-traction-suture>)

13. If recession is to be performed in cases with force duction test (+), would you recommend adding botulinum toxin at the same time to the recession?

FGV: I only do it in cases of paralytic strabismus

MG: No

JM: I would rather give the botulinum toxin first and wait for a few weeks to observe for any change in squint and then go ahead with the surgery. Intraoperatively I have never added botulinum toxin to my recession. In cases with positive force duction test, I prefer to recess till FDT is negative, confirmed intraoperatively.