ABO CLINICAL QUALITY IMPROVEMENT (QI) APPLICATION

Topic

Quality Improvement Topic:	Unilateral Ptosis Repairs
	Wouldn't it be nice if unilateral ptosis repair resulted in postoperative margin to reflex symmetry of 0.5mm or better?
What is the reach of this QI activity?	Local
Please explain/identify:	Surgical outcome improvement in Unilateral Ptosis Repair by incorporating the effect of Herring's Law on the contralateral eyelid in one surgeon's full-time oculoplastic practice.
Please identify the funding source(s) for this QI activity?	None

Project Description

1. Describe the quality gap or issue addressed by this activity. (Included in your response to this question should be a description of the resources that informed your decision to pursue this topic, a description of what the literature says about the issue you identified, and the rationale for choosing to address this clinical QI project.)	1. I am trying to improve Margin to Reflex 1 (MRD 1) symmetry in unilateral ptosis patients by incorporating Hering's Law testing in the preoperative assessment. Prior to this intervention, the target eyelid height (MRD 1) for the ptotic eyelid was based on the preoperative contralateral eyelid height. However, Hering's Law dictates there is equal innervation to both elevator muscles. Thus, once the ptotic eyelid is elevated, the contralateral (normal) eyelid often falls creating s see-saw effect of eyelid height as the stimulus to raise the lower eyelid has now lessened to both eyelids. Pre intervention analysis reveals postoperative MRD 1 asymmetry to be 0.96m. 2. Post intervention analysis will measure postoperative MRD 1 symmetry and be recorded and compared to the pre intervention group. 3. The proposed intervention is to apply a Hering's Law test while measuring the contralateral (normal) MRD 1 in the preoperative assessment. This is accomplished by elevating the ptotic (lower) eyelid for 20 seconds before measuring the contralateral MRD 1, and using this value as the intraoperative target height of the surgical eyelid.
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2. Describe the specific aim(s) of this activity (explanation of the numeric goals and importance to your work processes and your organization).	A retrospective chart review pre intervention group of 40 post-surgical unilateral involutional ptosis patients selected from my private practice consisting of 100% oculoplastic surgery. Exclusion criteria include previous ptosis surgery, neuromuscular disorders causing ptosis (I.e. myasthenia gravis), thyroid eye disease, and trauma related ptosis. A post intervention group of similar patients in quality and number will be selected, analyzed, and compared to the pre intervention group. A goal of MRD 1 asymmetry of 0.5 mm or less is the objective. This is an improvement from the pre intervention group whose average MRD 1 asymmetry is 0.96 mm.
3. Identify the measures that were evaluated in your workplace and provide a summary of pre- and post-intervention data for each measure. (Please provide source information for each measure.)	Pre intervention MRD 1 asymmetry from 40 patients is an average of 0.96 mm. Recent incorporation of Hering's Law test as described above has improved average postoperative MRD 1 asymmetry to 0.46 mm.
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4. What was the source of your data (check all that apply)?	Electronic Medical Record

5. What methods were used for data collection (check all that apply)?	Electronic Medical Record
6. What was the comparison group in this activity (e.g., a regional or national benchmark)?	The oculoplastic surgery community generally considers acceptable postoperative ptosis MRD 1 asymmetry to be 1.0 mm or less.
7. Will the identified measures address important issues for your processes of care and/or patients?	Yes
8. Describe the process you went through to develop the QI plan and the tests of change that will be undertaken to improve care (i.e., quality improvement plan design, implementation, and re-evaluation)	Unilateral ptosis repair is known to have unpredictable outcomes in terms of eyelid height asymmetry primarily due to the effect of Hering's Law on the contralateral eyelid. Retrospective chart review of 40 unilateral postoperative ptosis patients indicates an average of 0.96 mm MRD 1 asymmetry. This is acceptable, but I believe this can be better.
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9. What benefit do you believe these interventions will have on your processes of care and/or patient population?	Improved patient outcomes.

Project Outcomes/Results

1. Describe in detail your role in this activity (i.e., your role in identifying measures and reviewing data, identifying the QI topic, developing the QI plan, identifying interventions, implementing the QI plan and interventions into your practice, etc.).	1. My goal was to improve Margin to Reflex 1 (MRD-1) symmetry in unilateral ptosis patients by incorporating Hering's Law testing in the preoperative assessment. Prior to this intervention, the target eyelid height (MRD-1) for the ptotic eyelid was based on the preoperative contralateral eyelid height. However, Hering's Law dictates there is equal innervation to both elevator muscles. Thus, once the ptotic eyelid is elevated, the contralateral (normal) eyelid often fall creating s see-saw effect of eyelid height as the stimulus to raise the lower eyelid has now lessened to both eyelids. Pre-intervention analysis of 40 unilateral ptosis patients revealed postoperative MRD 1 asymmetry to be 0.96 mm. 2. The intervention was to apply a Hering's Law test while measuring the contralateral (normal) MRD 1 in the preoperative assessment. This was accomplished by elevating the ptotic (lower) eyelid for 20 seconds before measuring the contralateral MRD 1, and using this value as the intraoperative target height of the surgical eyelid. 3. Post-intervention analysis of postoperative MRD 1 symmetry on 40 unilateral ptosis patients was recorded and compared to the pre-intervention group.
2. Were other members from your care team involved in this activity?	Yes
If yes, please describe their role(s) in this activity.	Room scribe transferred the post-operative MRD measurements into the electronic medical record.
3. Describe the impact this QI effort had on your practice and the care that you provided to your patients.	Incorporating the Hering's Law test described above improved postoperative MRD-1 symmetry to an average of 0.48 mm over 40 unilateral ptosis patients. This is a 50% improvement over the pre-intervention group.
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Project Reflection

4. Reflecting on this self-directed Clinical QI project, how do you plan to sustain your improvement?	Going forward, every patient that I evaluate for unilateral ptosis I will incorporate the Hering's Law test as described to improve postoperative MRD-1 symmetry.
5. Was this Clinical QI project beneficial to your processes, patient population or practice?	This QI project helped improve patient satisfaction and reduce re-operation rates.
6. Please describe any lessons learned about your work processes by participating in this self-directed Clinical QI project?	Small, thoughtful, and directed evidence-based changes to one's clinical regimen can have a large impact on clinical outcomes and patient satisfaction.
7. What do you plan to do next to improve i.e. reduce variation in your processes of care?	Focus on reduction of ocular surface inflammation (i.e. ocular rosacea) in patients with epiphora who are otherwise without nasolacrimal duct obstruction.
8. Please describe whether or not you found participation in the self-directed Clinical QI project to be meaningful, impactful and a valuable use of your time.	The self-directed Clinical QI project helped me see how small directed changes in my clinical regimen can improve patient care. I will consider more seriously other ideas that I have to improve my clinical regimens.