SMILE from Scratch & SMILE in Montreal

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NARSL
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Disclosure

- M.H & M.P.: No relevant Financial Disclosure
Our practice
My background

- Medical studies at the University Montreal
- Residency at University of Sherbrooke
- Fellowship in anterior segment and glaucoma in Montreal
- Graduated in 2015 and started working in a university affiliated center (surgical teaching) and a glaucoma and cataract clinic
Dr Podtetenev

- Excellent mentor, colleague and friend
- Has more than 20 years of experience
- First to have done Lasik and Relex in Quebec
Training

- Started July 2015
- Patient evaluation, pre and post ops management
- Surgical observation for almost 6 months
- Hands-on wet lab training using pig eyes
- Received training from Zeiss
First Relex

- September 30th 2015 (FIRST RELEX in Quebec by M.P.)
- Successfully completed my first Relex cases on December 10th 2015
How did it feel?

it felt great!

My concerns

My difficulties
My concerns

- Delegating control
- Patient’s compliancy
My difficulties

- Docking
- Finding the planes
- Dissection
Smiles in Montreal

- The experience
  Relex Smile became our gold standard in myopic correction

- The philosophy
  Hands on pre per and post op care

- The results
## Results

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>Eyes</td>
<td>165</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>31.5+/-7.7</td>
<td>20-62</td>
</tr>
<tr>
<td>Female</td>
<td>62 %</td>
<td></td>
</tr>
<tr>
<td>Exclusion*</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

* Exclusion: maximal treatment with residual myopia
** Inclusion: minimum follow up 3 months
## Results: demographic and refractive data

<table>
<thead>
<tr>
<th></th>
<th>Mean +/- SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preop SE (D)</td>
<td>-5.02 +/- 2.05</td>
<td>-0.875 to -10.25</td>
</tr>
<tr>
<td>Preop astigmatism (D)</td>
<td>-0.58 +/- 0.68</td>
<td>0 to 3.75</td>
</tr>
<tr>
<td>Preop BCVA</td>
<td>20/20</td>
<td>20/20 to 20/40</td>
</tr>
<tr>
<td>Postop SE (D)</td>
<td>0.10 +/- 0.33</td>
<td>-1 to +1</td>
</tr>
<tr>
<td>Postop astigmatism (D)</td>
<td>0.17 +/- 0.25</td>
<td>0 to 1</td>
</tr>
<tr>
<td>Postop UCVA</td>
<td>20/20</td>
<td>20/20 to 20/40</td>
</tr>
<tr>
<td>Preop CCT (um)</td>
<td>541 +/- 31</td>
<td>465 to 610</td>
</tr>
<tr>
<td>Preop keratometry (D)</td>
<td>43.55 +/- 1.64</td>
<td>38.8 to 47.05</td>
</tr>
<tr>
<td>Cap thickness (um)</td>
<td>124 +/- 31</td>
<td>90 to 140</td>
</tr>
<tr>
<td>Lenticule thickness (um)</td>
<td>105 +/- 30</td>
<td>45 to 166</td>
</tr>
<tr>
<td>Optical zone (mm)</td>
<td>6.5 +/- 0.18</td>
<td>6.0 to 7.0</td>
</tr>
</tbody>
</table>
Uncorrected Distance Visual Acuity

Cumulative % of eyes

<table>
<thead>
<tr>
<th>Acuity</th>
<th>Cumulative % of eyes</th>
</tr>
</thead>
<tbody>
<tr>
<td>20/20</td>
<td>90%</td>
</tr>
<tr>
<td>20/25</td>
<td>5%</td>
</tr>
<tr>
<td>20/32</td>
<td>4%</td>
</tr>
<tr>
<td>20/40</td>
<td>2%</td>
</tr>
</tbody>
</table>
Spherical Equivalent refraction Accuracy

Accuracy of SEQ to Intended Target (D)

eyes @ 3 months f/u

+/- 0.75D 96%

% of eyes

100%

75%

50%

25%

0%

Accuracy of SEQ to Intended Target (D)
Loss of more than 1 line 0%

Change in Snellen Lines of CVA eyes @ 3 months f/u

<table>
<thead>
<tr>
<th>Loss of more than 1 lines 0%</th>
<th>99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of &gt; 1</td>
<td>0</td>
</tr>
<tr>
<td>Loss of 1</td>
<td>1</td>
</tr>
<tr>
<td>No change or Gain</td>
<td></td>
</tr>
</tbody>
</table>
Complications

- 2 epithelial ingrowth
- 3 incisional edge tear
- 1 interface haze (loss of 1 ligne)
- 1 lenticule fragment
- No loss of suction (yet)
Lenticule fragment

- UCVA 20/20
- Refraction -0.25 + 0.25 x 0
- Distortion at the 7 mm ring with no visual repercussion
Conclusion

- Relex smile is safe and effective
- Easy to perform by newcomers
- Preparation is key
The team :-)


Moisseiev E, Ben Ami T, Barak A. Vitrectomy and subretinal injection of tissue plasminogen activator for large submacular hemorrhage secondary to AMD. European journal of ophthalmology. 2014:0.


Thank You !!!