

## Abstract 196

### COMBINED DEXAMETHASONE INTRAVITREAL IMPLANT AND SILICONE REMOVAL FOR THE TREATMENT OF MACULAR EDEMA AFTER COMPLEX REGMATHOGENOUS RETINAL DETACHMENT

Oral

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#### **Purpose:**

To investigate efficacy and safety of combined dexamethasone intravitreal implant and silicone oil removal procedure for the treatment of macular edema resistant to medical therapy after complex retinal detachment surgery.

#### **Methods:**

19 patients underwent complex retinal detachment surgery with silicone oil tamponade and persistent macular edema were included in the study. These patients underwent silicone oil removal surgery combined to dexamethasone 0.7 mg intravitreal implant (Ozurdex). Changes in best corrected visual acuity, in central macular thickness and the rate of complications were our outcomes. To test the change of BCVA and CMT over follow-up was used Wilcoxon rank-sum test. All statistical tests were performed at the  $p < 0.05$  significance level. Univariate regression model was performed to assess the relationship between BCVA and CMT at 6 months post-SO removal combined with DEX-i and each independent variable

#### **Results:**

BCVA significantly improved to  $0.77 \pm 0.3$  LogMar after 1 month ( $p = 0.001$ ) from vitrectomy. After SO<sub>r</sub> + DEX-i, BCVA significantly improved to  $0.62 \pm 0.3$  LogMar at 1 month and remained stable over six months. After

SO<sub>r</sub> + DEX-i, CMT significantly decreased over follow-up ( $p < 0.0001$ ). Univariate regression models revealed a significant relationship ( $\beta = -0.45$ ;  $p = 0.001$ ) between last BCVA and macular status when DDR occurred. Furthermore, a significant relationship ( $\beta = -1.84$ ;  $p = 0.01$ ) between last CMT and the time period between vitrectomy and SO<sub>r</sub> + DEX-i was reported. Ocular hypertension ( $> 30$  mmHg) was observed in only one patient during the first week after vitrectomy.

#### **Conclusions:**

Macular edema is a frequent post surgical complication, and it could become chronic and recalcitrant. In our experience dexamethasone implant combined to silicone oil removal is a safe and valid option.

Parameters	$\beta$	se ( $\beta$ )	p	C.I. (95%)
<b>6m Post SO+DEX-i BCVA</b>				
Gender (w)	-0.27	0.12	<b>0.03</b>	-0.52 to -0.02
Age (yrs)	-0.002	0.01	0.78	-0.02 to 0.01
Glaucoma (Yes)	0.03	0.15	0.85	-0.29 to 0.35
Pseudophakic	-0.01	0.14	0.97	-0.29 to 0.28
Days between diagnosis and PPV	0.05	0.06	0.43	-0.07 to 0.17
Days between PPV and SO+DEX-i	-0.001	0.01	0.78	-0.01 to 0.01
RRD Macula (On)	-0.45	0.12	<b>0.001</b>	-0.70 to -0.19
<b>6m Post SO+DEX-i CMT</b>				
Gender (w)	-16.87	20.26	0.41	-58.90 to 25.15
Age (yrs)	0.74	1.24	0.56	-1.84 to 3.32
Glaucoma (Yes)	31.83	22.90	0.18	-15.67 to 79.33
Pseudophakic	-4.03	21.33	0.85	-48.26 to 40.19
Days between Diagnosis and PPV	-0.15	9.35	0.99	-19.55 to 19.24
Days between PPV and SO + DEX-i	-1.84	0.67	<b>0.01</b>	-3.24 to -0.44
RRD Macula (On)	-21.47	23.44	0.37	-70.10 to 27.15

Abbreviations: SO, Silicon Oil removal; DEX-i, intravitreal dexamethasone implant; BCVA, Best-corrected visual acuity; CMT, Central macular thickness; PPV, Pars Plana Vitrectomy; RRD, Regmatogenous Retinal detachment;  $\beta$ , Coefficient; se ( $\beta$ ), Standard Error of  $\beta$ ; C.I. (95%), Confidential Interval at 95%.

**Table 4.** Comparison between different parameters over follow-up (months).

		<i>Baseline</i>		<i>Post Vitrectomy</i>		
				1m	3m	
BCVA (LogMar)	<i>p</i> <sup>1</sup>	1.12±0.49		0.77±0.3 <b>0.001</b>	0.99±0.3 <b>0.08</b>	
CMT ( $\mu$ m)	<i>p</i>	<i>na</i>		369.6±83.3	429.6±59.1 <b>0.007</b>	
		<i>Pre SO removal + DEX-i</i>		<i>Post SO removal + DEX-i</i>		
BCVA (LogMar)	<i>p</i>	0.99±0.3		1m	3m	6m
				0.62±0.3 <b>&lt;0.0001</b>	0.62±0.3 <b>&lt;0.0001</b>	0.60±0.3 <b>&lt;0.0001</b>
CMT ( $\mu$ m)	<i>p</i>	429.6±59.1		271.8±28.4 <b>&lt;0.0001</b>	287.9±32.4 <b>&lt;0.0001</b>	294.0±46.4 <b>&lt;0.0001</b>

<sup>1</sup> Wilcoxon matched-pairs signed-rank test, m, month; BCVA, Best-corrected Visual Acuity, SO, Silicon Oil; DEX-i, intravitreal Dexamethasone-implant; 3m Post Vitrectomy = Pre SO removal + DEX-i