عنوان مقاله:

Evaluation of Visual Evoked Potential Binocular Summation after Corneal Refractive Surgery

محل انتشار:

بیست و نهمین کنگره سالیانه انجمن چشم پزشکی ایران (سال: 1398)

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خلاصه مقاله:

Purpose: To explore whether visual evoked binocular summation is affected in eyes with refractive errors after refractive surgery. Methods: Twenty participants (6M, 14F) aged 20–35 years (mean 26.7 ± 4.4) were assessed through patternreversal visual evoked potential in two different check sizes viewing with each of their eyes (first right eye and then left eye) and then with both eyes while wearing their best correction before undergoing surgery. Also, parameters of the P100 component of pattern-reversal visual evoked potential were evaluated after 3 months of refractive surgery. Monocular and binocular amplitudes and latencies of P100 wave and binocular summation indices werecompared between the before and after surgery. Results: Monocular visual evoked potentials elicited by two different high contrast checkerboards patterned stimuli were significantly reduced in amplitude (P<.05) after refractive surgery. However, there was no difference between the pre- and post-refractive surgery in monocular P100 latency(p> 0.05). Similar to monocular findings of amplitude, on binocular viewing, the pattern-reversal visual evoked potential amplitude was significantly reduced (P<.05) and latency was prolonged (p<0.05) after refractive surgery in participants. Also, the mean postoperative binocular summation index value as compared to that in the pre-operative was significantly less(P<.05) in this study. Conclusion: Refractive surgery can degrade binocular visual performance throughout the change in visual evoked potential binocular summation. However, monocular function deteriorates less than binocular function after refractive surgery.

کلمات کلیدی: