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**A COMPARISON OF FULL-FIELD ELECTRORETINOGRAMS RECORDED FROM THREE DIFFERENT TYPES OF CORNEAL ELECTRODES** P. Y.

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Purpose: To compare full-field electroretinograms (ERG) obtained from three different types of corneal electrodes. Methods: Standardized ERGs were recorded in four normal volunteers, aged from 18 to 33 years, in the same visit. Three different corneal electrodes- Monopolar Dawson, Trick, and Litzkow (DTL) electrode (Doran Instruments, USA), monopolar ERG-jet (Universo Plastique, Switzerland) and bipolar GoldLens (Doran Instruments, USA) were used in this respective order for ERG recording. Peak-to-peak amplitude and b-wave implicit time were measured and statistically analyzed (one-way ANOVA). Occurrence of electrical artifacts and comfort during exam were also considered. Results: Mean peak-to-peak amplitudes (mV) and implicit time (ms) were comparable for the 3 different electrodes. Results with mean and respective standard deviation are shown on the following table for the five different standardized ERG responses: scotopic rod, maximal response, oscillatory potentials, single-flash cone response and 30 Hz flicker.

Rod	Maximal	OP	Cone	Flicker	Ampl	IT	Amp	Amp	IT	Amp	IT	DTL													
328±117	81±8	456±155	212±39	125±84	28±1	86±58	27±2	ERG-jet	310±107	80±7	498±95	235±62	124±66	28±1	75±51	30±4	GoldLens	276±44	79±4	399±50	180±38	122±39	27±1	79±23	27±1

Electrical artifacts were found in all ERGs recorded from monopolar electrodes. All 4 subjects complained of discomfort during flicker response with ERG-jet electrodes. Conclusions: These results from a small number of tested subjects have shown comparable full-field ERGs measured from these 3 different corneal electrodes. However, electrical artifacts were frequently seen with both DTL and ERG-jet electrodes. A larger number of tested subjects and test-retest reliability measures are needed for better understanding the clinical usage of monopolar corneal electrodes.

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