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## High Frequency Electrotherapy for the Treatment of Meibomian Gland Dysfunction.

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### Abstract

**PURPOSE:** To test the safety and efficacy of **high frequency electrotherapy** (ET) on the clinical signs and symptoms of patients affected by dry eye and **meibomian gland dysfunction** (MGD).

**METHODS:** Twenty-five patients affected by MGD were enrolled. Quantum Molecular Resonance ET was administered by means of the Raxon-Eye device 4 times, once per week for 4 weeks. Patients were reexamined 1 month after the last **treatment**. The primary endpoint was reduction in corneal fluorescein staining. Additional endpoints were tear break-up time, Ocular Surface Disease Index score, **meibomian gland** secretion score, and the number of expressible **meibomian** glands. Safety endpoints were Logarithm of the Minimum Angle of Resolution (LogMar) best spectacle-corrected visual acuity and intraocular pressure.

**RESULTS:** Corneal fluorescein staining improved by 62.5% ( $P < 0.0001$ ), tear breakup time increased by 30.9% ( $P < 0.0001$ ), and the Ocular Surface Disease Index score improved by 37% ( $P < 0.001$ ). The meibum quality and the number of expressible **meibomian** glands also increased (35.7% and 12%,  $P < 0.001$  and  $P < 0.0001$ , respectively). Schirmer test scores increased after **treatment** by 16.5% ( $P = 0.01$ ). No adverse events were observed.

**CONCLUSIONS:** Quantum Molecular Resonance ET appears to be safe and significantly reduces symptoms and signs associated with MGD. It may have a relevant role in the **treatment** of evaporative dry eye disease.

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