Purpose: To analyze electroretinographic findings associated with posterior microphthalmos (PM).

Methods: Seventeen patients (34 eyes) with PM underwent a complete ophthalmic evaluation, fluorescein angiography, and standard flash electroretinography (ERG) according to the protocol of the International Society for Clinical Electrophysiology of Vision (ISCEV).

Results: Twenty of 34 eyes (58.9%) showed abnormal electroretinographic values. Scotopic ERG amplitudes were more reduced than photopic responses. Twelve eyes (35.3%) with retinitis pigmentosa had markedly reduced scotopic a- and b-waves amplitudes with prolonged implicit times. Moderate reduction of scotopic ERG amplitudes was observed in 4 eyes (11.8%) with pseudoretinitis pigmentosa secondary to prior uveal effusion. ERG amplitudes were variably reduced in 4 eyes (11.8%) with uveal effusion and without associated retinal pigmentary changes.

Conclusions: Retinitis pigmentosa, pseudoretinitis pigmentosa secondary to prior uveal effusion, and active uveal effusion should be considered as causes of visual impairment in patients with PM. Electroretinography in conjunction with clinical examination is helpful in differentiating between retinitis pigmentosa and pseudoretinitis pigmentosa, and in monitoring the visual function in such patients.

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