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# Reasons for Explantations of Posterior Chamber Phakic Intraocular Lenses in 1,490 Eyes

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**Abstract**  
PURPOSE: To investigate the reasons for the removal and/ or exchange of posterior chamber phakic intraocular lenses (PCPIOLs) and the outcomes of these procedures. METHODS: In this retrospective study, PCPIOL implantations performed between January 2015 and June 2023 in a single center were reviewed. The study group consisted of the files of eyes with removed and/or exchanged PCPIOL. Visual acuities, refraction errors, endothelial cell counts, and measurements of the vault before and after exchanges were recorded. Reasons for removal and/or exchange were evaluated. The tuck-and-pull technique was used in all explantations. RESULTS: Twenty-three of 1,490 eyes with PCPIOL implantation required removal and/or exchange. Of the explanted eyes, 17 were implanted with PCPIOLs for myopia (1.21% of all myopic corrections) and 6 were implanted with PCPIOLs for hyperopia (6.59% of all hyperopic corrections). The most common reason for removal and/or exchanges after implantation was inappropriate vault (10 of the 23 total removals and/or exchanges), followed by cataract development (7 of the 23 total removals and/or exchanges). A comparison of the biometric characteristics of eyes with PCPIOL removal and/ or exchange due to inappropriate vault with other PCPIOL implantations showed that anterior chamber depth, PCPIOL length, and white-to-white distance were significantly higher in the group of explanted eyes (P < .05). All eyes with high vault in myopic patients had a 13.2- or 13.7-mm length PCPIOL. CONCLUSIONS: The main reason for PCPIOL removal and/ or exchange is vault values outside the ideal limits and cataract development. Before ordering 13.2- and 13.7-mm long PCPIOLs, biometric data of both eyes and recommended PCPIOL sizes should be carefully reviewed.

Keywords **Keywords Plus:** [IMPLANTABLE COLLAMER LENS](#); [OPTIMIZATION](#); [MYOPIA](#)

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