

RELATIONSHIP OF VARIATION IN SURGEON PHACOEMULSIFICATION TECHNIQUES AND SURGICALLY INDUCED ASTIGMATISM CONSISTENCY

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ABSTRACT

Aims: This study aimed to evaluate the relationship of variation in phacoemulsification techniques practised by surgeon and the surgically induced astigmatism (SIA) consistency.

Methodology: The phacoemulsification technique variations of four experienced surgeons were evaluated using total variation score (TVS) of PTechSIA questionnaire. Less technique variation was indicated by a lower TVS. SIA coherence of 80 post-phacoemulsification patients were analyzed using SIA Calculator Version 2.1. A higher coherence value indicates better SIA consistency.

Results: The surgeon with the lowest and highest TVS showed the highest coherence of 90% and lowest coherence of 11%, respectively. Spearman's correlation found a strong negative correlation between SIA coherence and TVS ($r = -0.95$, $p < 0.05$).

Conclusion: Variation in surgeon phacoemulsification techniques contributes to lower SIA consistency. Therefore, a surgeon is recommended to apply a consistent phacoemulsification technique in every attended case to achieve a better SIA consistency.

Keywords: SIA coherence, SIA consistency, surgeon phacoemulsification technique