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**Original article:**

**Efficacy of SRK-T ,Holladay 1 and Hoffer Q Iol Formula Calculations in Ammetropes after Phacoemulsification**

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**Abstract**

**Background:** To compare the efficacy of third generation IOL calculation formula SRK T ,Holladay1 and Hoffer-Q in eyes with axial length <22mm (short eyes),22-24.5 mm(normal eyes) and >24.5mm(long eyes).In addition, to compare the curvatural ametropia in these patients and relationship between corneal diopteric power and axial length.

**Materials and Methods:** 225 eyes were divided into three groups according to axial length after which it was subdivided into 3 groups with 25 patients each, where in SRKT, Holladay1 and Hoffer-Q formulae were used in each group respectively.

**Results:** Least correction (0.447) was required in long eyes when SRK T formula was used followed by, Hoffer-Q (0.525) and then Holladay1 formula (0.609). In normal eyes least correction (0.404) was required when Holladay1 formula was used, followed by Hoffer-Q (0.466) and then SRKT formula (0.533). In short eyes least correction (0.428) was required when SRK T formula was used followed by Holladay1 (0.433) and then Hoffer-Q formula (0.501).

 **Conclusion:** SRKT & Hoffer-Q scores were significantly lower (p<0.05) than Holladay1 with respect to the difference in UCVA & BCVA, Log MAR in Long Eye group. SRKT was lower than Hoffer-Q, however this difference was not statistically significant. In normal & short eye groups, none of the formulae showed statistically significant difference with each other with respect to difference in UCVA & BCVA Log MAR. However, Holladay1 in normal eye group and SRKT in short eye group showed best results.

**Keywords:** SRK T, Holladay1, Hoffer-Q, Phacoemulsification