

# Mechanical arcuate keratome for naturally occurring astigmatism

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## Abstract

To evaluate the usefulness of mechanical arcuate keratotomy for correction of astigmatism, we used a new system with a conical housing and two carrier-mounted micrometer diamond knives. The incision length, depth and location can be predetermined. Two series of patients with 2-7 D of naturally occurring astigmatism and postcorneal surgery were treated at two different institutions. A nomogram was used. Videokeratography documented corneal curvature changes. No overcorrection occurred in the initial series. Follow-up is not complete in the second series. Four eyes were  $\leq 1$  D of planned correction. The reduction of astigmatism varied from 43 to 91% with a mean of 70%. The achieved reduction decreased in the first month by 0.2 D or 6.8% with a maximum in one eye of 24%. The best uncorrected visual acuity increased in all patients. The nomogram used tends to induce undercorrection. Arcuate Keratotomy with this mechanical keratome permits deep, linear cuts with early stabilization of the achieved correction.

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