Summary

Epikeratophakia is a newly developed form of refractive corneal surgery for the correction of aphakic vision. It has not been designed primarily to compete with contact and intraocular lenses. It has a wide range of applications created for refractive problems.

The procedure involves the removal of the corneal epithelium from the recipient eye and the suturing of prelathed lamellar donor corneal graft onto the surface of the recipient cornea, the epithelium that has been removed has regrown out from the edges and now covers the new tissue on the front of the eye. Also, the living cells from the patient have moved into the now tissue making it truly a living part of patient's eye The procedure carries low risk because of the very little manipulation of the recipient cornea. It is considered theoretically reversable procedure, the grafts that are placed on the cornea can be removed at any time if necessary and the eye will restore its initial state. The surgical technique itself is relatively simple it does

not require the intraoperative use of Sophisticated equipments as the cryolathe and microkeratome. Another advantage of this procedure is that contact lenses lathed from corneal tissue can be as readily available as plastic contact lens.

Epikeratophakia in the pediatric aphakic patient:

Epikeratophakia is suitable as a form of optical correction for children who has been intolerant to contact lens wear, it is safer than intraocular lens implantation. Intensive amblyopia therapy is undertaken in all cases of uniocular aphakia.

The rate of success was about 95% of eyes underwent epikeratophakia. The patients received an average of 93% of the desired corrections.

Epikeratophakia in the adult aphakic patient:

Specific indications for epikeratophakia in adults were criteria that excluded patients as candidates for intraocular implant. Also it is suitable for patients who can't tolerate spectacles and contact lenses.

The residual hyperopia after operation is ranged from 0.43-0.7 D. The patients achieved 87% of the predicted correction.