INTRODUCTION

Keratoconus (KC) is a progressive, noninflammatory, bilateral (but usually asymmetrical) disease of the cornea, characterized by paraxial stromal thinning that leads to corneal surface distortion. Visual loss occurs primarily from irregular astigmatism and myopia and secondarily from corneal scarring. All layers of the cornea are believed to be affected by KC, although the most notable features are the thinning of the corneal stroma, the ruptures in the Bowman layer, and the deposition of iron in the basal epithelial cells, forming the Fleischer ring. Breaks in and folds close to the Descemet membrane result in acute hydrops and striae, respectively.

- KC typically presents at puberty and progresses until the third and fourth decades of life, although it can occur or progress at any age.
- KC progresses at various rates but tends to progress more rapidly in young patients **(Rabinowitz, 2003).**

Corneal Ectasia is a condition resembling Keratoconus but comes from a different origin. Almost invariably the cause is refractive eye surgery, specifically LASIK. After LASIK, the cornea has been made thinner. So, internal pressure from within the eye can cause expansion or distension of the cornea. The resultant distorted corneal surface will usually make it impossible to have clear vision with eyeglasses or soft contact lenses. a special gas

permeable contact or scleral lens will be needed to restore lost vision. These special lenses will act to create a new corneal surface allowing the patient to regain clear vision **(Mazzotta, 2006).**

Clinically; Patients often report decreasing vision (distortions, glare/flare, and monocular diplopia or ghost images) with multiple unsatisfactory attempts in obtaining optimum spectacle correction. Soft contact lenses and spectacles may initially give satisfactory vision, but vision tends to decline over time and requires rigid gas permeable (RGP) contact lenses for correction (**Kennedy, et al. 1986**).

Physically; KC is divided according to (**Kennedy, et al. 1986**) into mild, moderate, and advanced.

- ***Corneal signs:***
    - Vogt's striae
    - Scars in Bowman's layer
    - Irregular keratometric mires
    - Scissoring of red reflex
    - Kayser-Fleischer ring
    - Munson's sign
    - Rizzoutti's sign