ABSTRACT

PURPOSE:

To Evaluate The Endothelial Cell Density And Central Corneal Thickness In Patients With Pre Existing Diabetic Retinopathy And Compare The Variation Between From Non Diabetic Individuals

MATERIALS&METHODS:

100 Patients Were Included Within The Study And Divided Into Cases And Controls .CCT And ECD Were Analysed Using Specular Microscopy Between Cases And Controls And Later Within cases They Were Sub Divided Into NPDR And PDR& Further Analysis Was Carried Out

Results:

The Mean Value of (right eyes) ECD in cases is 2279.9 with SD 385.043 where as in controls it is 2529.8 with SD 217.376. The mean value of CCT(right eyes) in cases is 503.5 with SD 45.198 where as in controls it is 536.36with SD 52.236 . In left eyes the mean value of ECD in cases is 2291.8 with SD 363.7361 where as in controls it is 2555.26 with SD 202.2578. The mean value of CCT in cases is 505.78 ± 46.675where as in controls it is 538.58 ± 24.902. Within the cases (right eyes) the mean value of ECD in NPDR is 2432.325 ± 248.08 and the mean CCT is 522.225 with SD 26.30 where as in PDR there is a drastic fall in both parameters .the mean value of ECD is 1670.2 ± 155.5 and mean CCT is 428.6 ± 18.28 similarly in the left eyes, the mean
value of ECD in NPDR is 2438.85 with SD 230.99 and mean CCT is 524.4 ± 29.36 where as in PDR it is 1703.8 with SD 94.08 and mean CCT is 431.3 ± 20.52

1) Conclusion: corneal endothelial cell density and the central thickness of cornea can be decreased in type 2 diabetes mellitus

2) Corneal decomposition (decrease in ECD&CCT) is much more higher in patients suffering from advanced eye disease (PDR) than in patients suffering with early stages of diabetic retinopathy (NPDR)

So it goes to say that in patients with diabetic retinopathy, any intraocular surgery should be planned with a compromised cornea in mind

Key words:

Central corneal thickness, endothelial cell density, diabetic Retinopathy stages, specular microscopy