TO COMPARE THE EFFICACY OF ORAL ACETAZOLAMIDE VS EPLERENONE IN PATIENTS OF CENTRAL SEROUS CHORIORETINOPATHY

CONTENTS

INTRODUCTION

- Serous detachment of the neurosensory retina due to one or more focal retinal pigment epithelium (RPE) lesions is a characteristic of the retinal disorder known as central serous chorioretinopathy (CSCR).
- In 1866, von Graefe first recognized central serous chorioretinopathy (CSCR) as "relapsing central luetic retinitis."
- MalesaremorelikelythanfemalestodevelopCSCR,whichismostcommoninmidlife.
- CSCR is regarded as the fourth most frequent non-surgical retinopathy and a common cause of visual impairment in individuals of working age, behind diabetic retinopathy, age-related macular degeneration, and retinal vein occlusion.

- MajorsymptomsofCSCRincludes
  - ✓Impairedvision,
  - ✓Usually Unilateral,
  - ✓Concomitantmicropsiaand
  - ✓Metamorphopsia,whichthepatientnormallyperceivesasadarkareainthe center of the visual field.

PATHOPHYSIOLOGYOFCSCR

- Guyer et al. suggested ICG-video angiography (ICG-V) as a potential model for the pathophysiology of CSCR. They found that while FA did not exhibit diffuse hyperpermeability around active leakage sites, ICG-V did. They therefore concluded that hyperpermeability existed at the choroid level rather than the retinal pigment epithelium (RPE) level.
- Choroidal hyperpermeability is hypothesized to be the source of serous detachments of the RPE, which can cause the RPE to tear or decompensate.
- This causes RPE leakage, which is the diffusion of proteins, water, and electrolytes and ultimately results in a neurosensory retinal separation.

- The purpose of this study was to compare the effect of oral eplerenoneversusoralacetazolamideinthepatientsofCentral Serous Chorioretinopathy.

MATERIALANDMETHODS

STUDYDESIGN

- Randomizedclinicaltrialwithprospectivecomparativestudydesign.Thestudywas conductedatRajshreeMedicalResearchInstituteBareilly.

SAMPLESIZE:

- A total of 50 subjects were included in the study who had Central Serous Chorioretinopathy. The sample size was calculated by G Power software (Effect size-0.65, error-α 0.05, power-0.45).
- Samplepopulationforthisstudywasdividedintotwogroups–GroupAandGroupB.
- GroupA-25patientsweregivenOralEplerenone50mg/day
- GroupB-25patientsweregivenOralAcetazolamide250mgthriceaday.
- Patients were followedupat2weeks,6weeksand3months.

RESULTS

Table1.Distributionofstudyparticipantsaccordingtoage.

Age	Group A	Group B
18-28	8(32.0%)	9(36.0%)
29-39	10(40.0%)	6(24.0%)
40-50	3(12.0%)	5(20.0%)
>50	2(8.0%)	5(20.0%)

Table2.Distributionofstudyparticipantsaccordingtogender.

Gender	GroupA	Group B
Male	10(40.0%)	14(56.0%)
Female	15(60.0%)	11(44.0%

Table3.Changesinvisualacuityinallgroupsat2weeks,6weeksand3 months.

visualacuity	Group A	Group B
Baseline	0.52±0.17	0.55±0.20
At2Weeks	0.28±0.09	0.42±0.14
At6Weeks	0.11±0.05	0.28±0.11
At3Months	0.05±0.01	0.19±0.07

Table4Distributionofstudyparticipantswithleakageon FFA(Fundusfluorescence angiography)

FFA	Group A	Group B
Baseline	25(100.0%)	25(100.0%)
At2Weeks	20(80.0%)	22(88.0%)
At6Weeks	13(42.0%)	18(72.0%)
At3Months	3(12.0%)	10(40.0%)

Table5.Distributionofstudyparticipantsaccordingtorecurrencerateandcomplications.

	Group A	Group B
TotalNoofpatients	25(100.0%)	25(100.0%)

Noofrecurrence	2(8.0%)	7(28.0%)
Complications	0(0.0%)	4(16.0%)

DISCUSSION

- The present study found that oral eplerenone significantly improves thevisualacuitythantheoralacetazolamidewhichwassimilartothe study conducted by Zhao et. al.
- This study showed that oral eplerenone significantly decreases the leakageonFFAascomparedtoacetazolamide.Thesimilarresultwas showed in the study conducted by sampoo. et al.
- This studyfound that the recurrence rate was only 8% when patient wasonoraleplerenonewhiletherecurrenceratewas28%whenthe patient was on oral acetazolamide.

CONCLUSION

- ThepathophysiologyofCSCRisstillunknownandcomplex,making it a difficult disease to comprehend and treat.
- This study shows that eplerenone is one of the promising pharmacologicmethodsthattargetmanypathophysiologicalpathways that may improve visual acuity and speed up recovery.
- Patients with CSCR may be treated with oral acetazolamide or oral eplerenone waiting for the leak to stop on its own, but the oral eplerenoneconsideredasmoreeffectivethantheoralacetazolamide for the treatment of CSCR patients.