

STUDY OF OUTCOME OF PARS PLANA VITRECTOMY IN RETINAL DETACHMENT WITH PVR (PROLIFERATIVE VITREORETINOPATHY) CHANGES.

Ophthalmology

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ABSTRACT

Background & Aims: **Aim:** To study outcome of pars plana vitrectomy in RD with PVR changes. **Background:** To Access The Outcome After Pars Plana Vitrectomy (PPV) Procedure On Rhegmatogenous Retinal Detachment With Proliferative Vitreoretinopathy Changes. To Analyse The Cause Of Failure Of Vitrectomy Surgery Due To Proliferative Vitreoretinopathy **Material And Method:** This Study Will Be Carried Out In Department Of Ophthalmology, M And J Institute Of Ophthalmology (Government Medical College), Civil Hospital, Ahmedabad. Consecutive Sampling Method Adopted, The Entire Subject Meeting The Criteria Of Inclusion Were Included In Study. 30 Patients Data Were Collected. After Taking Into Consideration The Inclusion And Exclusion Criteria, Patients Whose Having Rhegmatogenous Retinal Detachment With PVR Changes Enrolled For Our Study And Pars Plana Vitrectomy Was Performed. All Patients Will Be Examined Pre-Operatively And Postoperatively On Day 1, Day 7, After 1 Month, After 3 Months. **Result:** During At The End Of Follow-Up, We Were Observed That 70% Had Improved Visual Acuity, 3.33% Had Not Improved Visual Acuity And 26.67% Had Worsens Visual Acuity. The Anatomic Success Rate Obtained At The End Of The Follow-Up Period Was 83.33%, And Total Retinal Attachment Achieved In 25 Eyes. Retinal Detachment Was Observed In 5 Eyes (16.67%). **Conclusion:** In RD With PVR Changes There Is Increase In Success Rate In Term Of Anatomical Outcome And Visual Outcome After Par Plana Vitrectomy.

KEYWORDS

Retinal Detachment , Vitrectomy , Proliferative Vitreoretinopathy

INTRODUCTION:

Retinal Detachment Refers To The Separation Of The Neurosensory Layer From The RPE Underneath. Floaters (Mouches Volantes), Light Flashes, And, Depending On The Severity Of The Detachment, Loss Of Vision And/Or Visual Field Are Common Symptoms Experienced By Patients With Retinal Detachments.

In The Instance Of A Rhegmatogenous Retinal Detachment (RRD), A Tear Or Hole In The Retina, Represented By The Greek Word Rhegma, Causes The Separation Of The Layers By Allowing Fluid From The Vitreous Cavity To Flow Into The Subretinal Region.^[1,2]

In Addition To Age, Other Risk Factors Include Having A Retinal Detachment In The Opposite Eye, Having Extreme Myopia, Being A Man, Being Injured, Having Cataract Surgery, Or Having A Family History Of Retinal Detachment.^[1]

The Most Frequent Retinal Disorder That Poses A Risk To Vision And Necessitates Immediate Attention Is Rhegmatogenous Retinal Detachment (RRD).^[4] Liquid Vitreous, Tractional Pressures That Result In A Retinal Break, And Fluid Access Through The Retinal Break Are The Three Essential Prerequisites For The Development Of RRD.^[5,6] Major Risk Factors That May Contribute To RD Have Been Found.^[7] One Of The Key Risk Variables Associated With Predisposing To Cataract Surgery Has Been Discovered.^[8]

Identification And Localization Of Retinal Tears, Their Closure, And The Release Of Any Traction On The Borders Of The Tears Are The Goals Of RD Treatment.^[3] Pneumatic Retinopexy, Scleral Buckling, And Vitrectomy Are Common Forms Of Treatment.^[8] The Difficulty Of The Detachment, The Patient's Age, And The Surgeon's Preferences Are Taken Into Consideration While Selecting The Best Surgical Strategy. The Preferred Treatments For Straightforward, Simple RD Are Pneumatic Retinopexy And Scleral Buckling Surgery.^[9] Pars Plana Vitrectomy (PPV) Is Advised In The Event Of Complicated Detachments.^[9]

Rhegmatogenous Retinal Detachment (RRD) Complicated By Inferior Retinal Breaks And Proliferative Vitreoretinopathy (PVR) Remains A Challenging Situation For Vitreoretinal Surgery.^[10] High Grade PVR (PVR C Or D) Is The Most Common Cause Of Recurrent Retinal Detachment After Surgery.^[11] The Main Problem Is That Any Classic Endotamponade Agent, Either Gas Or Silicone Oil, Does Not Completely Cover The Lower Quadrant; And The Highgrade PVR Leads To Recurrence Of The Retinal Detachment.^[11] Some Surgeons Prefer Scleral Buckling (SB) Combined With Vitrectomy To Increase The Endo Tamponading Effect. But The Use Of The Scleral Buckle

Has Its Own Complications, Such As Choroidal Hemorrhage, Prolonged Operation Time, Refractive Change, Diplopia, Possible Decreased Retinal Blood Flow And Risk Of Anterior Segment Ischemia.^[12]

PPV Is Superior To The Scleral Buckling Procedure In A Number Of Ways.^[13] The Greater Incidence Of Redetachment In These Patients May Be Because To The Technically Challenging Access To The Vitreous Base In Phakic Eyes, Which Makes PPV In Such Circumstances Challenging.^[14,15]

Therefore, The Aim Of This Study Was To Evaluate With Outcome Of Pars Plana Vitrectomy (PPV) Surgery Operated Patients Whom Having Retinal Detachment With Proliferative Vitreoretinopathy Changes Observed During The Study Period.

Material And Methods:

Study Design: It Is A Hospital Based Prospective Interventional Study.

Study Duration: July 2020 To July 2022

Source Of Data: Rhegmatogenous Retinal Detachment With PVR Changes Patients

Method Of Data Collection: Data Was Collected After Approval From Ethics Committee, B.J. Medical College.

Setting Of Study: This Study Will Be Carried Out In Department Of Ophthalmology, M And J Institute Of Ophthalmology (Government Medical College), Civil Hospital, Ahmedabad.

Sampling Method: Consecutive Sampling Method Adopted, The Entire Subject Meeting The Criteria Of Inclusion Were Included In Study.

Sample Size: 30 Patients

Inclusion Criteria:

- Patient With Rhegmatogenous Retinal Detachment With PVR Changes.
- Patient With Traction RD.
- Patients Age > 18 Years.

Exclusion Criteria:

- Patient Who Do Not Give Consent For The Examination Or Unwilling For Follow-Up.

- Patient Having Exudative RD.
- Secondary RD.
- Patients Having RD Due To Trauma
- RD Treated With Buckle.
- Giant Retinal Tear.

Patient Selection:

After Taking Into Consideration The Inclusion And Exclusion Criteria, Patients Whose Having Rhegmatogenous Retinal Detachment With PVR Changes Enrolled For Our Study.

Statistical Analysis:

Data Was Collected, Compiled And Tabulated In Excel Sheet. Qualitative Data Were Represented As Number With Percentage. Quantitative Data Were Represented As Mean With Standard Deviation. Statistical Analysis Was Done By SPSS 26.0 Version Software (IBM, SPSS, Inc.). <0.05 Value Considered As A Statistical Significant.

Ethical Committee Clearance:

Ethical Committee Clearance Was Taken Before Starting The Study.

Informed Consent:

Written And Informed Consent Was Taken From All Patients Who Participated In The Study.

Methodology:

Demographic Information (Age, Gender), Best Corrected Visual Acuity (BCVA), Intra Ocular Pressure (IOP), Lens Status, Extent Of Retinal Detachment, And Type Of Previous Surgery (If Any) Was Recorded. Operative Reports Were Reviewed To Determine The Extent Of The RD, Extent Of PVR, Pre-Op Macular Attachment Status, Post-Operative Anatomic And Visual Outcome Was Recorded From The Medical Records

All Patients Were Undergoing 23 And 25G Pars Plana Vitrectomy Surgery (Microincision Vitrectomy Surgery) And The Eibos Non-Contact Wide Angle Viewing System. All Cannulas Were Placed Trans Conjunctively Followed Core Vitrectomy And Meticulous Peripheral Vitreous Base Shaving With Scleral Depression. PVR Membranes Were Dissected Off The Retinal Surface Using A Combination Of Intraocular Forceps, Membrane Pick And Vitreous Cutter. Sub-Retinal PVR Membranes Was Transacted Or Removed Only If The Attending Surgeon Felt It Was Causing Significant Traction That Prevented Retinal Detachment.

All Patients Will Be Examined Pre-Operatively And Postoperatively On Day 1, Day 7, After 1 Month, After 3 Months.

Preoperative Evaluation:

A Medical And Ophthalmic History Was Taken And A Complete Ophthalmological Examination Was Carried Out Including:

Visual Acuity (Snellen Chart)

Intraocular Pressure Measurement With Applanation Tonometry Anterior Segment Examination Using Slit Lamp To Assess The Clarity Of The Cornea And The Condition Of The IOL.

Meticulous And Precise Preoperative Examinations Of The Posterior Segment With Indirect Ophthalmoscopy And Scleral Indentation To Find All Retinal Breaks And Associated Retinal Pathology After Papillary Dilatation With Topical Tropicamide 1% And Phenylephrine 2.5% With Detailed Drawing Of The Fundus.

PVR Changes Has Been Classified According To Retina Society Committee Classification. (1983)

Operative Techniques:

Under Local Anaesthesia, Pars Plana Vitrectomy 23G 25G PPV (Microincision Vitrectomy Surgery) Was Done.

Postoperative Evaluation:

A Complete Ophthalmological Examination Was Carried Out On Post Operative Follow On Day 1, Day 7, 1st Month, 3rd Mouth Including:

Visual Acuity (Snellen Chart) And Best Corrected Visual Acuity Intraocular Pressure Measurement With Applanation Tonometry Anterior Segment Examination Using Slit Lamp To Assess The Clarity Of The Cornea And The Condition Of The IOL

Meticulous And Precise Preoperative Examinations Of The Posterior Segment With Indirect Ophthalmoscopy.

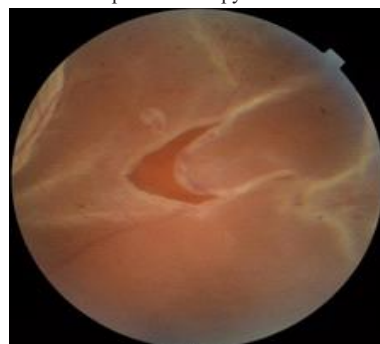


Figure 1: Horse Shoe Tear

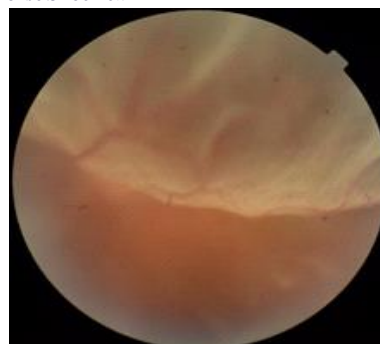


Figure 2: Rhegmatogenous RD



Figure 3: Proliferative Vitreoretinopathy With Horseshoe Shape Tear



Figure 4: 3 Ports In Vitrectomy

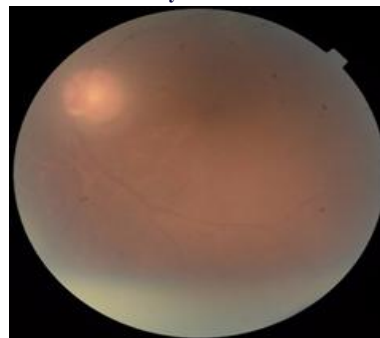


Figure 5: Post Vitrectomy Fundus Photos (1)

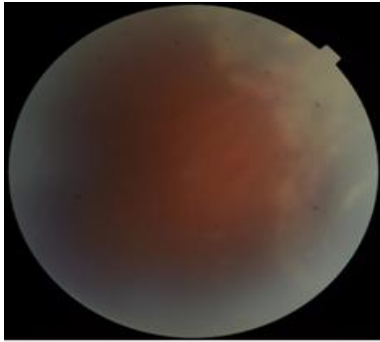


Figure 6: Post Vitrectomy Fundus Photos (2)

RESULT:

We Were Enrolled 30 Patients Whom Operated With Pars Plana Vitrectomy In Retinal Detachment With Pvr Changes In Department Of Ophthalmology, Civil Hospital, Ahmedabad. These Patients Selected Based On Satisfied With Our Inclusion As Well As Exclusion Criteria.

1)

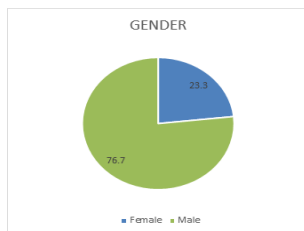
Table: 1 Age Group Distribution

Age Group	Number Of Patients	Percentage
21-40	5	16.7
41-60	18	60
61-80	6	20
>80	1	3.3
Total	30	100

2)

Among 30 Patients, 76.7% Were Males Whereas 23.3% Were Females Observed In Our Study.

Figure: 1



3) In Our Study, 66.7 % Operated Primary At Our Centre Whereas 33.3% Operated Patients Who Referred From Another Centre.

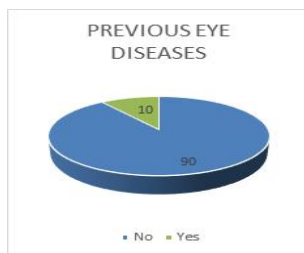
4)

Table: 2 Among 30 Patients, 6.7% Had Taken Topical Or Systemic Treatment In Our Study.

TOPICAL OR SYSTEMIC TREATMENT TAKEN	Number Of Patients	Percentage
No	28	93.3
Yes	2	6.7
Total	30	100

5) Among 30 Patients, 10% Had Previous Eye Disease Before Surgery.

Figure: 2



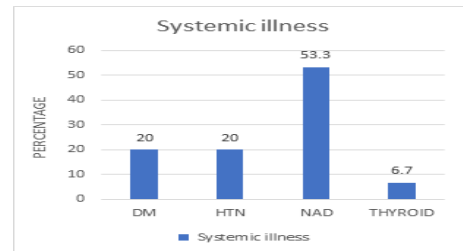
6) Among 30 Patients, 36.7% Had Bilateral Cataract Surgery, 23.3% Left Eye Cataract Surgery And 10% Had Right Eye Cataract Surgery Performed Before Surgery.

Table: 3

Previous Eye Surgery	Number Of Patients	Percentage
Nad	9	30
Bece Sx	11	36.7
Lece Sx	7	23.3
Rece Sx	3	10
Total	30	100

7) Among 30 Patients, 20% Had Diabetes Mellitus, 20% Had Hypertension And 6.7% Had Thyroid Disorders.

Figure: 3



8)

Table: 4 Among 30 Patients, 63.33% Had Affected With Right Eye Whereas 36.67% Had Affected With Left Eye.

Affected Eye	Number Of Patients	Percentage
LE	11	36.67
RE	19	63.33

9)

Table 5: Retinal Detachment With PVR Grading

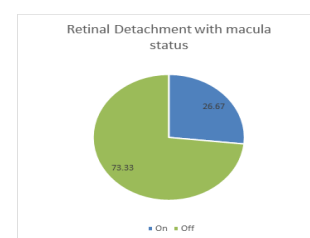
	Number Of Patients	Percentage
A	2	6.67
B	4	13.34
C1	3	10
C2	2	6.67
C3	1	3.34
D1	1	3.34
D2	10	33.34
D3	7	23.34

Represented As Retinal Detachment With Different PVR Grading. According To Our Study, 33.34% Had D2 PVR Grade.

10) Retinal Detachment With Macula Status

Among 30 Patients, 73.33% Had Macula Off Status Whereas 26.67% Had Macula On Status.

Figure: 4



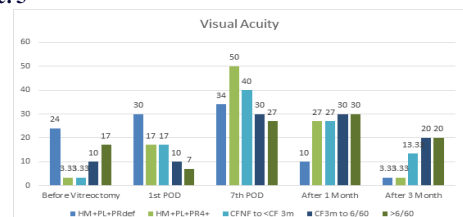
11)

Table: 6 Among 30 Patients, 40% Had Horseshoe Tear.

Horseshoe Tear	Number Of Patients	Percentage
Present	12	40
Absent	18	60

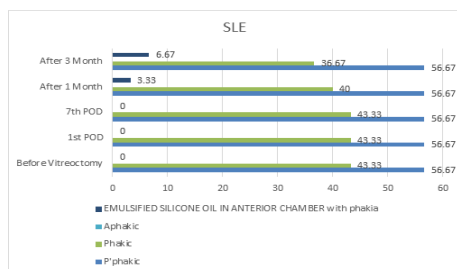
12) Represents As Visual Acuity Of Study Operated Before The Surgery And After Operated With Follow-Up.

Figure: 5



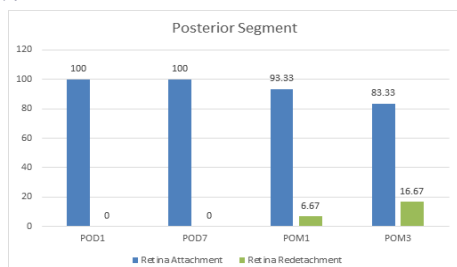
13) Represent As SLE Findings In Operated Before As Well As After Operation Of Surgery With Followup.

Figure: 6



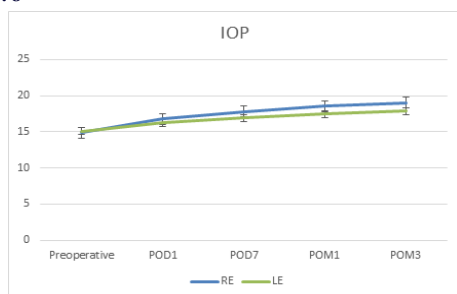
14) Represent As Posterior Segment In Operated Before As Well As After Operation Of Surgery With Follow-Up.

Figure: 7



15) Represent As IOP In Operated Before As Well As After Operation Of Surgery With Follow-Up.

Figure: 8



16) Represented As Best Corrected Visual Acuity Of Eye Before Operated Surgery And End Of The Follow-Up Of Surgery.

Table 7:

	Preoperative BCVA	Final BCVA at 3months
HM+PL+PRdef	7(24)	5(17)
HM+PL+PR4+	9(30)	2(7)
CFNF to <CF 3m	10(34)	8(27)
CF3m to 6/60	3(10)	9(30)
>6/60	1(4)	6(20)
Total	30	30
Chi square : 11.582; p= 0.0208		

17) Among 30 Patients, 70% Patients Improved Visual Acuity After Surgery Whereas 26.67% Patients Worsen The Visual Acuity.

Table 7:

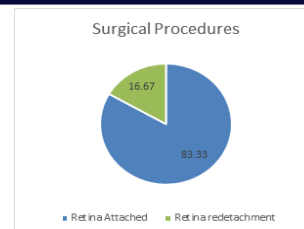
Visual Acuity (Improvement)	Number Of Patients	Percentage
Improved	21	70
Worsen	8	26.67
Same	1	3.33

18) Among 30 Patients, 90% Patients Of IOP Value Was Increased Whereas 6.67% Patients Of IOP Was Decrease At The End Of Follow-Up Of Surgery.

19) Out Of 30 Patients, 83.33% Was Retina Attached Whereas 16.67% Was Retina Detached Observed During Follow-Up Of Surgery.

Figure 9:

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20) Failure At Last Visit (Retinal Attachment)

Table:8 Represents Retina Redetachment Status During Follow-Up Of Surgery.

Retina Redetachment	Number Of Patients
Pod1	0
Pod7	0
Pom1	2
Pom3	3
Total	5 (16.67%)

21)

Table :9 Overall Mean Age Of Study Population Was 52.27 ± 12.11

	Mean	Sd
Age	52.27	12.11

DISCUSSION:

Retinal Detachment (RD) Is A Sight-Threatening Ocular Disease Requiring Surgical Intervention^[16]; It Has A Prevalence Of 6.3–17.9/100 Thousand People.^[17] It Can Lead To The Development Of Choroidal Detachment (CD). The Progression Of Proliferative Vitreoretinopathy (PVR)^[20,21], And Irreversible Visual Damage^[22] If It Is Not Treated In Time. It Has Been Reported That The Poor Visual Acuity Outcome Is Related To The Delay Of Surgery In RD Patients.^[23,24]

The Main Reasons For RD In Adults Are Trauma, Myopia, Previous Ophthalmic Surgeries, And Congenital Or Developmental Anomalies.^[17,24] However, The Idiopathic Or Unknown Causes Of Retinal Detachment Are Still A Common Phenomenon In Adults.

Several Studies Have Confirmed The Hypothesis That PVR Occurs As A Reparative Process Induced By Retinal Breaks And An Excessive Inflammatory Reaction. The Retinal Breaks Are Present In 5–10% Of The Public; However, Very Few Lead To RRD. PVR Is Always Significant When RRD Diagnosed In Adults. There Are Known Risk Factors For The Occurrence Of PVR, Which Include Large Retinal Breaks, (E.G. Giant Retina Tears, Multiple Large Break), Ocular Inflammation, Preoperative Or Post Operative Choroidal Detachment, Excessive Cryotherapy, Vitreous Haemorrhage, Preoperative PVR, And Large Detachments Greater Than Two Quadrants. Surgery Remains The Primary Treatment For Established PVR. The Surgical Goal Is To Remove The Traction On The Retinal Surface, Promote Closure Of Retina Breaks And Reattachment Of The Retina.

Therefore, The Early Precision Examination, Diagnosis, And Treatment Are Important In Adults Who Have The Symptoms Of Blurred Vision Or Vision Loss And Potential RD Closure Of Retinal Breaks And Release Of Vitreous Traction On The Retina Is The Goal Of All Retinal Detachment Surgery. Scleral Buckling Surgery Releases The Radial Vitreous Traction And Brings The Retina In Close Contact With The RPE. Pars Plana Vitrectomy Enables Instrumental Release Of Vitreous Traction, Internal Drainage Of SRF And Achieves Attachment Of Retina At The Operating Table Itself.

In Our Study, We Were Enrolled 30 Patients Whom Operated With Pars Plana Vitrectomy For Retinal Detachment With PVR Changes. Out Of 30 Patients, 40-60 Years Group Of Patients Were More Common Observed In Our Study. We Observed That Male Patients Highly Observed Compared To Females In Our Study.

History Of Patient's Eye Condition:

We Observed That 93.3% Patients Were Not Taken Any Systemic Treatment Previously As Well As 90% Had Not Previous Eye Disease. Out Of 30 Patients, 36.7% Patients Were Operated Bilateral Eye Cataract Surgery, 23.3% Were Operated Left Eye Cataract Surgery, 10% Were Operated Right Eye Cataract Surgery And 30% Were Not Operated Any Type Of Surgery.

Systemic Illness:

Among 30 Patients, 20% Had Diabetics, 20% Had Hypertension, 6.7% Had Thyroid And Else Not Having Any Type Of Systemic Illness.

Retinal Detachment With PVR Grading:

In Our Study, Pseudophakic Eyes (56.67%) Had More Retinal Detachment Observed Compared To Phakic Eyes (43.33%). The Surgical Repair Methods In RD Generally Include The Buckling Procedure And PPV. The Selection Of Surgical Repair For The RD Depends On The Etiology And Features Of Retinal Detachment Such As The Severity Of PVR, Site, Size, And The Number Of The Retinal Breaks. The Scleral Buckling Procedure Was The Commonly Used Method For The Treatment Of RD In Young Adults Before PPV Was Widely Used.^[25] However, The Scleral Buckling Or Band As The Primary Procedure Was Not Commonly Used In The Total RD After The PPV Era.

Out Of 30 Patients, 60% Patients Had D Grade PVR, 20% Patient Had C Grade PVR, 13.34% Had B Grade PVR And 6.67% Had A Grade PVR With Retinal Detachment Observed In Our Study. Our Study Was Having Similarity With Ethopia Study, At 69% With D Grade PVR.^[26] Another Study Okonkwo Et Al., Observed That C Grade PVR Highly Observed Compared To D Grade Of PVR In His Study. A Study From South Africa Lower Reported PVR In 33% Of The Eyes,^[27] While From East Africa PVR Rate Was Lower Reported As 17.5%.^[28] PVR Rates In The Sub Saharan Africa, Therefore, Are In The Double Digits Contrary To Findings In The More Developed Countries, Which Have Lower Single-Digit PVR Rates.^[29,30]

Macula Status

Out Of 30 Patients, 26.67% Had Macula Status On Whereas 73.33% Had Macula Status Off Observed In Our Study. We Observed Good Prognosis As Well As Better Anatomical Success In Retina Attachment Operated Patient Who Had Macula On Status In Our Study.

Horseshoe Tear:

Out Of 30 Patients, 40% Had Horseshoe Tear Present In Our Study. Okonkwo Et Al.,^[27] Observed That 19.6% Had Horseshoe Tear Present In Their Study. Sultan Et Al.^[31] Also Reported As 22.9% Horseshoe Tear. Our Results Were Slightly Higher Than Among This Study.

Visual Acuity:

We Observed That 70% Patients Improved Their Visual Acuity, 26.67% Worsen Their Visual Acuity And 3.33% Not Difference Observed After Pars Plana Vitrectomy. Among HM+ PL+ PR Def, HM+PL+PR4+ And CFNF To <CF 3m Visual Acuity Patients, Respectively Improved Their Visual Acuity As 28.57%, 77.8%, 20%. In Our Study, We Observed That Significant Improvement Association Between Preoperative BCVA And Final BCVA At 3 Months. (P=0.0208)

IOP

We Were Observed That 90% Patients Had Improved Their IOP, 3.33% Had Not Improved IOP And Remaining Else 6.67% Had Hypotony Observed In Our Study During Followup Period.

Retina Redetachment:

We Were Observed That 16.67% Patient Had Retina Redetachment After Surgery During Followup. Our Study Results Similar With The Study With Okonkwo Et Al. Study.^[27] He Observed That 11% Retina Redetachment During Followup Of Study. We Observed That 23.53% Retinal Redetachment Among Pseudophakic Patients Whereas 7.69% Retinal Redetachment Among Phakic Patients. We Were Not Observed Significant Difference Between Phakic And Pseudophakic Patients With Retinal Redetachment. (P=0.2368) Present Study 16.67% Okonkwo Et Al.^[108] 11% Sultan Et Al.^[112] 20.8% Yokoyama Et Al.^[113] 27%

From The Previous Study, It Is Known That After An RD In One Eye, The Risk Of RRD Is ~10% In The Fellow Eye. Therefore, The Fellow Eye Should Be Examined Carefully And Treated Early.

Retinal Attachment:

We Observed That 83.33% Had Retinal Attachment After 3 Month Of Successful Surgery. In Our Study, All The Retinal Attachment Patients Had PVR Grade A, B, C1, C2, C3 And D1. We Also Achieved Anatomical Success Of Retinal Attachment In Patients Who Had Severity Of PVR Grade. We Also Observed That All Retinal Attached Patients Had Macula On Status. In Our Study, Visual Acuity Also

Improved After Surgery At The End Of Follow-Up Surgery.

Follow-Up Of Visual Acuity Functional Rate:

After Pars Plana Vitrectomy Surgery, We Taken Follow-Up At The Interval Of At First Day Of POD, Seventh Day Of POD, First Month And Third Month Of After Surgery. During At The End Of Follow-Up, We Were Observed That 70% Had Improved Visual Acuity, 3.33% Had Not Improved Visual Acuity And 26.67% Had Worsens Visual Acuity. At The End Of Follow-Up, 26.67% Had $\leq 6/60$, 43.33% Had Figure Counts, 6.67% Had CFNF, 6.67% Had HM+PL+PR+4 And 16.67% Had HM+PL+PrDef. Among A, B, C1, C2, C3 And D1 Grade Of PVR Had Improved Visual Acuity At The Third Month Of Follow-Up Of Surgery. Out Of 10 Patients On D2 Grade Of PVR Patients, 6 Patients Improved Visual Acuity, 3 Patients Had Same Visual Acuity And 1 Patient Had Worsen Visual Acuity Observed In Our Study. Among D3 Grade Of Patients (N=7), 5 Patients Had Same Visual Acuity And Only 2 Patients Had Improved Visual Acuity. So, We Could Have Said As Severity Of Increasing In PVR Respectively Decreasing The Chance Of Improving Visual Acuity After Surgery.

In Our Study, We Observed That Significant Improvement Association Between Preoperative BCVA And Final BCVA At 3 Months. (P=0.0208)

Follow-Up Of Anatomical Success Rate:

After Pars Plana Vitrectomy Surgery, We Taken Follow-Up At The Interval Of At First Day Of POD, Seventh Day Of POD, First Month And Third Month Of After Surgery. We Used Silicon Oil In All The Eyes For Retina Attachment Whereas Some Previous Study Used Silicon Oil As Well As C3f8. In Our Study, The Anatomic Success Rate Obtained At The End Of The Follow-Up Period Was 83.33%, And Total Retinal Attachment Achieved In 25 Eyes. Retinal Detachment Was Observed In 5 Eyes (16.67%). All Retinal Detachment Eyes Had D2 And D3 Grade Of PVR As Well As HM+PL+PRDEF Visual Acuity Observed In Our Surgery. Among 5 Eyes Of Retina Redetachment, 2 Eyes Had Redetached Observed At First Month Of Surgery Followup And Three Eyes Had Redetached Observed At Third Month Of Surgery Follow Up. Our Study Had Similar Findings In Anatomical Success Rate With Study Of Koc H. Et Al.^[32] And Lewis With His Colleagues^[33]. Koc H. Et Al.^[32] And Lewis With His Colleagues Had Anatomical Success Rate Following As 81.25% And 90%

CONCLUSION:

PVR Is The Leading Cause For Failure Of RD Repair And Is Identified By The Growth And Contraction Of Cellular Membranes Within The Vitreous Cavity And On Both Sides Of The Retinal Surface Leading To Retinal Contraction And Fixed Starfold Formation. Various Risk Factors Have Been Identified That Leads To PVR Formation. Eyes With Primary Preoperative PVR Grade A, B, C Appear To Have Significantly Good Visual And Anatomical Success Rate. Eyes With Primary Preoperative Grade D PVR Appear To Have Significantly Is Good Anatomical Successful Outcome Than Visual Outcome. So, In RD With PVR Changes There Is Increase In Success Rate In Term Of Anatomical Outcome And Visual Outcome After Par Plana Vitrectomy.

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