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A Study of Efficacy of Conjunctival Autograft With Autologous Blood Coagulum in Primary And Recurrent Pterygium and its Out Come

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Abstract: *This study is a prospective study conducted in tha department of OPHTHALMOLOGY,in government general hospital Guntur. during a period of one-year (2015-2016) conjunctival autografting was performedin 45 patients. Out of which 5 were recurrenct type and the remaining were progressive fleshy pterygia. All the patients were in the age group of 20 – 60 and above.*

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I. Introduction

Pterygium is a triangular wing shaped encroachment of bulbar conjunctival tissue extending to cornea . It can be small atrophic to large progressive fiber tissue that causes visual disturbances. Risk factors for pteryium include conjunctivalisation of cornea by ultraviolet radiation , hot dry dusty environment. Pterygial fibroblasts are responsible for corneal invasion . Hereditary factor is also belived to play a role in growth of pterygium The common indications for surgery include reduced vision, symptomatic irritation and inflammation, irregular astigmatism and cosmetic reasons. Various surgical techniques like bare sclera excision with or without mitomycim C, thiotepa drops, beta irradiation, amniotic membrane grafting, conjunctival autograft have been described.

Despite availability of different treatement modalities recurrence continues to be a major complications. Recurrence is more common in bare sclera technique than excision with autograft. Hence autologous blood coagulum for reported to be effective method in view of low recurrence ana other complications. Pteryum is common in our country, which is located within tha tropics. Hence, I have decided to determine outcome of conjunctival autograft in primary and recurrent pterygiumPurpose of the studyGuntur city and its surroundings have dry dusty and hot climate, which is major risk factor. The main occupation of people is agriculture, daily wages labourers which is mostly outdoor occupation. Pterygium causes visual disturbances by encroaching pupillary area, astigmatism but few people come early due to cosmetic reasons. It can be treated effectively by surgical excision but recurrence is very high. Hence the need for conducting this study is to evaluate the efficacy of conjunctival autograft in management of pterygium and to prevent its recurrence.

II. Aims And Objectives.

To study tha efficacy of limbai conjunctival autograft in primary and recurrent Pterygium. To report tha incidence of recurrence after primary pterygium surgery using utograft with autologous blood coagulum

III. Materials And Methods

This study is a prospective study conducted in tha department of OPHTHALMOLOGY,in government general hospital Guntur. during a period of one-year (2015-2016) conjunctival autografting was performedin 45 patients. Out of which 5 were recurrenct type and the remaining were progressive fleshy pterygia. All the patients were in the age group of 20 – 60 and above.

Detailed anterior segment examination was done under slit lamp for diagnosis of pterygium and characteristics such as grade, type and site were recorded in all patients. The grading of pterygium was done according to tha classification as Grade 1 (atrophic) -thaepiscleralvessals under tha body of pterygium is not obscured and is clearly distinguishable. Grade 2 (Intermediate) -episcleral vessels are obscured party and indistinguishable. Grade 3 (fleshy) -thaepiscleral vessels are totaiiy obscured.

1. A thick fleshy and vascular pterygiumwith few infiltrates in tha cornea is coined as progressive.

2. Thin, atrophic, attenuated with no infiltrates in thacornia and little vascularity was coined as non- progressive. Based on the location, the pterygioum was labeled as nasel or temporal. Visual activity, refraction, ocular motility, intraocular pressure, patiency of lacrimal passages and fundus examination findings were noted.

Inciusion criteria:
1) PrimaryPterygium.
2) Recurrent Pterygium.
3) Age group of 20 -60.
4) Both males and females.

Exclusion criteria:
1) Patients with ocular surface diseases.
2) Any previous intra – ocular surgery /trauma.
3) Patients with pseudopterygium.
4) Bleeding disorders

IV. Results

The present retrospective study was performed on 45 patients in the department of ophthalmology, Guntur Medical college Guntur; during a period of one_year (2015-2016).

1.Age Distribution

Age group	Number	Percentage
20-30	7	16%
30-40	15	33%
40-50	11	24%
50-60	12	27%
T0tal	45	100%

Of the 45 patients included in the study common age distribution was between 30-40 years although there is not much difference between 40-50 and 50-60 years of age group.

2.Sex Distribution

Sex Distribution	Number	Percentage
Male	16	36%
Female	29	64%
Total	45	100%

The sex wise distribution was found to be more in females 29 (64%) than males 16 (36%).

3.Occupation

Occupation	Number	Percentage
Indoor	16	36%
Outdoor	29	64%
Total	45	100%

The study shows higher incidence of pterygium in outdoor workers 64% as compared to the indoor workrs 36%.

4.Laterality

Laterality	Number	Percentage
Unilateral	37	82%
Bilateral	8	18%
Total	45	100%

In this study 82% patients had unilateral pterygium and 18% had bilateral pterygium.

5.History& complaints

History	Number	Percentage
Fleshy Mass	43	96%
Vision Diminution	7	16%
Redness	13	29%
Ocular Irritation	10	22%

In this study 96% patients presented with fleshy mass. Vision diminution was noted in 16% of patients. Redness was present in 29% of patients and ocular irritation in 22% of them. However no patient complained about pain.

6.Grade of pterygium

Grade	Number	Percentage
One (atrophic)	1	2%
Two (ntermediate)	33	73%
Three (fleshy)	11	24%
Total	45	100%

In this study most of the patients of about 73% had grade 2 pterygium and 24% had grade 3 pterygium.

7.Type of pterygium

Pterygium Type	Number	Percentage
Progressive	40	89%
Recurrent	5	11%
Total	45	100%

In This study majority of the patients 89% had progressive type of pterygium and 11% presented with recurrent pterygium.

8.Site of pterygium

Site	Number	Percentage
Right Eye	31	69%
Left Eye	14	31%
Total	45	100%

In our study 69% patients presented with pterygiuminright eye and 31% in left eye. However this finding is incidental and is not significant.

9.Location of pterygium

Location	Number	Percentage
Nasal	41	91%
Temporal	4	9%
Total	45	100%

Majority of patients had pterygium on nasal side (91%) and 4 patients (9%) had on temporal side in this study.

10.Surgical Outcome

Outcome		Congestion	Edema	Haemorrhage
Post Op day 1	Number	44	35	19
	Percentage	98%	78%	42%
1 Week	Number	42	26	15
	Percentage	93%	58%	33%
1 Month	Number	25	14	10
	Percentage	56%	31%	22%
3 Months	Number	10	2	2
	Percentage	22%	4%	4%
6 Months	Number	0	0	0
	Percentage	0%	0%	0%

In the present study congestion was found in 98% of patients on day 1, followed by 93% during 1st week, 22% over 3 months and absent at the end of 6 months and graft edema was seen in 78% of patients at day 1, 58% in 1st week, mildedema in 31% of patients during 1st month, only 4% percent at the end of 3 months. And totally absent by 6 months. Haemorrhage was found in 42% of patients on the first day followed by 33 % on day 7 and 22% at the end of one month. It was only 4% by 3 months and totally absent after 6 months.

11.**Complications**

Complications		Displacement	Retraction	Recurrence	Granuloma
Post Op day 1	Number	1	0	0	0
	Percentage	2%	0%	0%	0%
1 Week	Number	0	2	0	1
	Percentage	0%	4%	0%	2%
1 Month	Number	0	0	0	0
	Percentage	0%	0%	0%	0%
3 Months	Number	0	0	2	0
	Percentage	0%	0%	4%	0%
6 Months	Number	0	0	0	0
	Percentage	0%	0%	0%	0%

In our present study few complications noted were like graft displacement in 2% of patients at day 1 and retraction of graft seen in 4% patients at 1st Week of surgery.

Granuloma formation in 2% patients in 1st week of follow up was noted.Recurrence was seen in 4% of patients at the end of 3rd month.

V. Summary

This randomized controlled trial on 45 patients with primary and recurrent pterygium was conducted at the department of Ophthalmology,GUNTUR MEDICAL COLLEGE ,Guntur ; during a period of one-year (2015-2016). In the present study increased incidence of pterygium was noted in patients of age group 30-40 (33%) and sexdistribution showed female preponderance (64%). Majority of patients(64%) were found to be outdoor workers and almost all of them complained of fleshy mass(96%) and most of the patients(73%) had grade 2 pterygium and the commonest sitebeingnasal side(91%).Recurrence was noted in 4% of patients with only fewer other complications like granuloma (2%),displacement(2%), and retraction(4%), which did not affect the final outcome of the surgery hence conjunctival autograft with blood coagulum, is a simple, safe and effective alternative in the management of pterygium excision.

VI. Conclusion

Conjunctival autograft with autologous blood coagulum is a safe, simple and quick procedure. It does not involve loss of tissue and is very effective in preventing recurrences. Also, it significantly reduces the surgical time with fewer postoperative compluications. Advantages also being very economical with ease availabity and it requires lesser learning curve and can be performed in any medical care centre level. It is a very useful technique which not only supplements other treatment modalities but also supplants them.

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