



Clinical Evaluation of Patients Presenting With Rhegmatogenous Retinal Detachment

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ABSTRACT

Aim : To study the risk factors and clinical features of rhegmatogenous retinal detachment

Material & Methods: An observational study was conducted among 50 patients who were diagnosed with rhegmatogenous retinal detachment attending the retina OPD. Evaluation of patients consisted of detailed history pertaining to the risk factors for retinal detachment and ophthalmic examination.

Observation & Results: The most important risk factor for rhegmatogenous retinal detachment was blunt trauma-28% followed by lattice degeneration-18%, myopia and cataract surgery-16%. 88% of cases had retinal detachment with macula off. The break was mostly single-46% and horse shoe in type-34%

Conclusion: The results of the study highlighted that blunt ocular trauma is the most important risk factor for development of rhegmatogenous retinal detachment. Majority of patients showed retinal detachment with macula off. The macula off patients was higher in our study than in studies conducted in developed countries, which could be due to delayed presentation.

Keywords: rhegmatogenous retinal detachment, risk factors, clinical features, blunt trauma, macula off, horse shoe tear

INTRODUCTION

Rhegmatogenous retinal detachment is defined as the separation of retinal pigment epithelium from neurosensory retina. Despite treatment advances, functional results remain poor, with only 42% achieving 20/40 vision and only 28% if the macula

is involved¹. Much of this problem is due to varied risk factors and clinical presentation especially in third world countries preventing a timely diagnosis. The reasons for these differences can be summarised as either genetic, or environmental and socio-economic factors, such as lack of, resulting in

late presentation and complex detachments². Against this background this study was undertaken among the patients diagnosed with rhegmatogenous retinal detachment in our centre, to analyse the most common risk factors associated with rhegmatogenous retinal detachment and the common clinical manifestations thereby enabling facilities an early diagnosis and treatment of this sight threatening condition.

PURPOSE

To study the risk factors and clinical features of rhegmatogenous retinal detachment.

MATERIALS & METHODS

An observational study was conducted among 50 patients who were diagnosed with rhegmatogenous retinal detachment. The study duration spanned over a period from may 2013 to june 2014

Inclusion Criteria

Patients presenting to retina OPD diagnosed with rhegmatogenous retinal detachment were included in the study

Exclusion Criteria

Tractional retinal detachment
Combined retinal detachment
Exudative retinal detachment
Secondary detachments after vitrectomy, strabismus or ocular surgeries were excluded from the study

PATIENT DETAILS

Details of patient with reference to following were collected- Past history of trauma, previous ocular surgeries & any complications and laser treatment for any lesions were also collected. Detailed ocular

examination was done consisting of assessment of visual acuity & refractive status ,slit lamp examination ,gonioscopy, fundus examination by +90 D lens with the slit lamp biomicroscopy, Indirect ophthalmoscopy with scleral indentation and B-scan .

In fundus examination the following details of detachment were looked into-Quadrant of retina detached, Macular attachment status, Type, site, number of breaks, Presence of any peripheral retinal degeneration.

OSERVATION AND RESULTS

50 eyes of 50 patients were included in the study. Out of 50 cases in our study, the predominant age group of patients with retinal detachment was 20-40 years (36%).There were 30 males(60%) and 20 females (40%) in our study. Observing the associated factors, blunt ocular trauma was present in 28% of cases, making it the most commonly associated risk factor. The other important risk factors observed in the study was lattice degeneration(18%), myopia more than 6 dioptre and cataract surgery(16% each).All the risk factors observed are elaborated in table no:1

Table No.1: Risk factors for Rhegmatogenous retinal detachment

RISK FACTOR	NUMBER(%)
blunt trauma	14(28%)
lattice degeneration	9(18%)
myopia > 6 D	8(16%)
cataract surgery	8(16%)
pc rent	3(6%)

nd yag capsulotomy	2(4%)
coloboma choroid	1(2%)
none	5(10%)

Clinical features with which patients presented consisted of floaters, photopsia and peripheral field defect in 48%, 28%, 26% of cases respectively. Relative afferent pupillary defect was present in 40% and shaeffer's sign in 44%.

Table 2 shows clinical features of rhegmatogenous retinal detachment

Table.2: Clinical Features of Rhegmatogenous Retinal detachment

CLINICAL FEATURES	NUMBER OF CASES(%)
peripheral visual field defect	13(26%)
floaters	24(48%)
photopsia	14(28%)
rapd	20(40%)
shaeffer's sign	22(44%)

In majority of patients (34%) the duration of these symptoms ranged from 3-5 weeks

Table no.3: Shows Duration of Symptoms

DURATION OF SYMPTOMS	NUMBER(%)
<2 WEEKS	15 (30%)
3-5 WEEKS	17 (34%)
6-8 WEEKS	5 (10%)
9-12 WEEKS	5 (10%)
12-27 WEEKS	8 (16%)
TOTAL	50(100%)

The analysis of retinal detachment characteristics showed that 88% of cases presented with macula off detachments.

Table 4: Characteristics of Retinal Detachment

RD CHARACTERISTICS	NUMBER(%)
RD with macula off	44(88%)
RD with macula on	6(12%)

On fundus examination, horse-shoe tear was the most common finding in 34% followed by holes (16%). Details of type of break is elaborated in figure 1

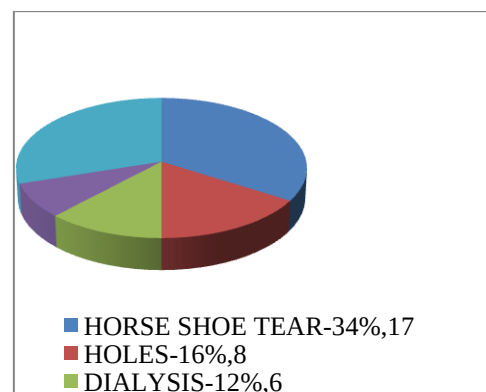


Figure.1 type of break

Regarding the distribution of breaks the breaks were single in 46% and multiple in 24% of cases. Figure 2 shows the number of breaks

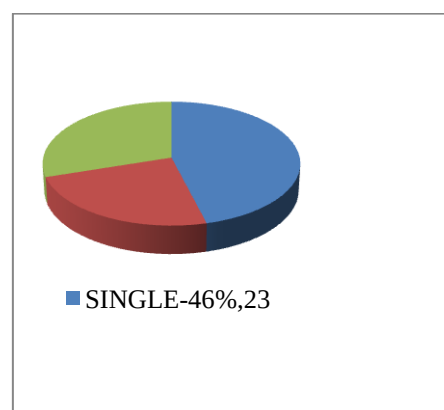


Figure 2 number of breaks

DISCUSSION

Retinal detachment is a significant cause of ocular morbidity. Incidence of retinal detachment is nearly 18 per 100 000 per year³ in developing countries.

Rhegmatogenous retinal detachment occurs following a full thickness defect in sensory retina thereby resulting in the accumulation of liquefied vitreous in subretinal space. It commonly occurs in middle aged males. The common predisposing factors responsible for detachment described in the literature are trauma, myopia, peripheral retinal degenerations, previous cataract surgery.

In our study trauma was the most important risk factor (28%). Our study results were comparable with the studies conducted in South Africa and Zaire. Trauma was thought to contribute to the detachment in 30% of eyes in South Africa⁴ and 23% in Zaire⁵. But the study conducted by S. Jalali⁶ et al in South India, trauma was contributing factor in only 16.28%.

The other significant contributing risk factors in our study were lattice degeneration in 18% of cases, myopia more than 6 dioptre and cataract surgery each in 16% of cases. Cataract surgery contributed to 13.3% of cases in the study by Rosman et al⁷. In the study by Sharma et al⁸ lattice degeneration was risk factor in 16% of cases and myopia in 30% of cases.

Considering the spectrum of symptoms most of the patients in our study presented with floaters (48%), followed by photopsia (28%) and peripheral visual field defect (26%). Relative afferent pupillary defect was present in 40% and Shaeffer's sign in 44%. In majority of patients (34%) the duration of these symptoms ranged from 3-5 weeks. These results are comparable with the study by Sharma et

al⁸. In their study the most common presentation was floaters (40 %) followed by flashes (32 %) and visual field defect (18 %). 24 patients (48 %) had a relative pupillary defect, and Shaffer's sign was positive in 45 cases (90 %). The mean duration of symptoms was 28.64 +/- 36.96 days.

In our study single break was seen in 46% of patients while a study by Ling et al⁹ showed presence of single break in 57% of patients.

Horse shoe tear was seen in 34% of cases in our study. In the study by S. Jalali et al⁶ horse shoe tear was seen in 47% of cases.

In our study macula was off in 88% of cases while in a study by Sharma et al⁸ macula was off in 78% of cases.

CONCLUSION

The results of our study highlighted that blunt ocular trauma was the most important risk factor for development of retinal detachment. Majority of patients in our study showed retinal detachment with macula off. The macula off patients was higher in our study than in studies conducted in developed countries, which could be due to delayed presentation and would adversely affect the visual outcome in these patients. Hence early & frequent examination of retinal periphery after ocular blunt trauma is recommended. Also patient education regarding ocular complication like retinal detachment due to blunt trauma, should be done at various levels of health care and early referral of patients to a tertiary hospital should be emphasized to retain a good visual potential.

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