



Clinico -epidemiological Study of Ocular Rosacea: A Retrospective Study

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Abstract

Background: Rosacea is a relatively common dermatosis which is characterized by erythema, telangiectasias, papules, and pustules in the centro- facial area.

Aims: To study the clinico- epidemiological profile of ocular rosacea.

Methods: Records of patients of rosacea were screened. Eye symptoms and signs of all patients with either ocular or cutaneous rosacea were looked for. The demographics and the clinical pattern of these patients were recorded

Results: A total of 100 patients of rosacea were screened. The female and male ratio was 8:1. There were 31 patients of ocular rosacea. Mean age of patients with ocular findings was 44. 28±9.72years. Itching was the most common (80.64%) presenting symptom and lid margin irregularity(58.06%) commonest eye sign followed by meibomian gland dysfunction(54.83%).

Conclusion: Ocular rosacea is not an uncommon disease. Clinical manifestations of ocular rosacea may be trivial leading to under diagnosis. Early diagnosis and treatment may prevent the discomfort and the deterioration of vision.

Keywords: Rosacea , Ocular, under diagnosed.

Introduction

Rosacea is a chronic inflammatory disease which is more common in middle aged females. Cutaneous manifestations in the form of telangiectasias, papules or pustules are usually seen. Ocular involvement in rosacea is also seen but is often overlooked. Ocular involvement is seen in 6-72 % of patients with rosacea.^[1] Rosacea can involve different structures of eye e.g, meibomian gland, conjunctiva or cornea. About one third of patients of rosacea can involve the cornea which can be sight threatening.^[2]

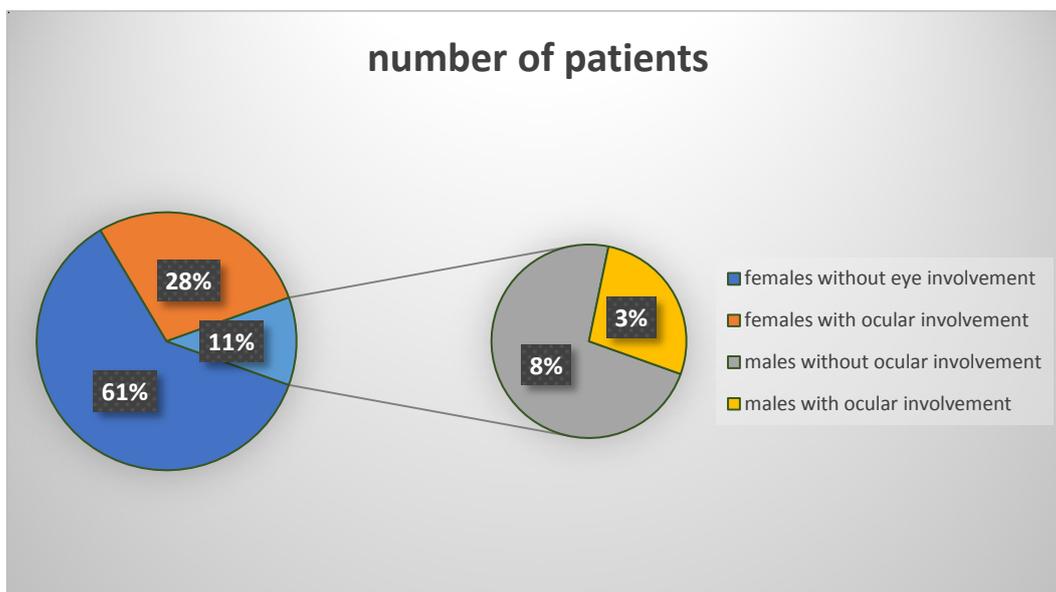
Material and Methods

This was a retrospective study where records of 100 patients of rosacea in the last 6 months attending ophthalmology OPD and dermatology OPD were screened. Patients who had any complaints or signs suggesting eye involvement were observed. These findings were recorded and demographic profile of such patients were observed. Statistical analysis was done using epi info7.2.2 All discrete variables were recorded as frequency and continuous variables as means, medians and standard deviation.

Results

We screened records of 100 patients of rosacea. There were 89 females and 11 males Ocular

involvement was seen in 31 patients . Out of these 28 were females (31.4% of total females) and 3 males (27.2% of total males).



There was no significant difference in ocular involvement in both sexes (p value >0.05) Mean age of patients was 44. 28±9.72years. The youngest patient was 19 years of age and the oldest 62 years.

Different ocular complaints and signs were recorded. The various symptoms with which the patients presented were as shown in figure 1.

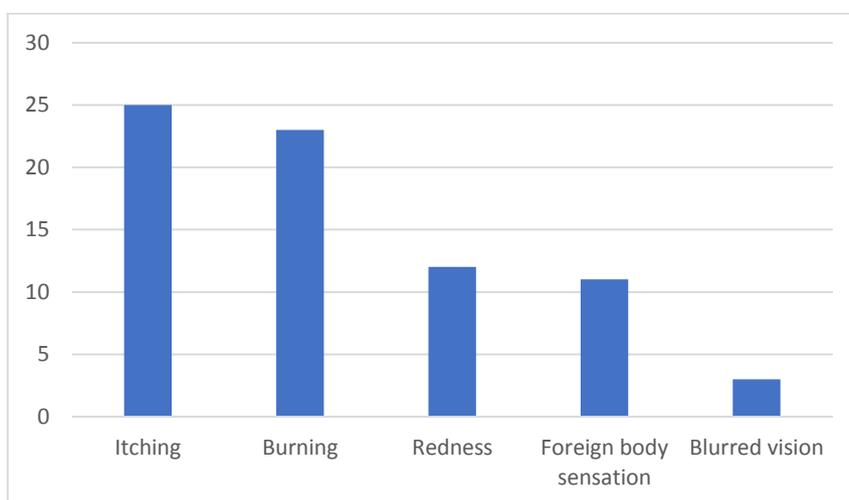


Figure 1: Showing the distribution of symptoms in patients of ocular rosacea

Maximum patients complained of itching (80.6%), followed by burning (74.2%) and redness (38.7%) Eyelid signs were seen in all the 31 patients (100%), conjunctival involvement was seen in

64.5 % patients and corneal involvement in 16.1 % patients Various eyelid signs were as shown in Figure 2

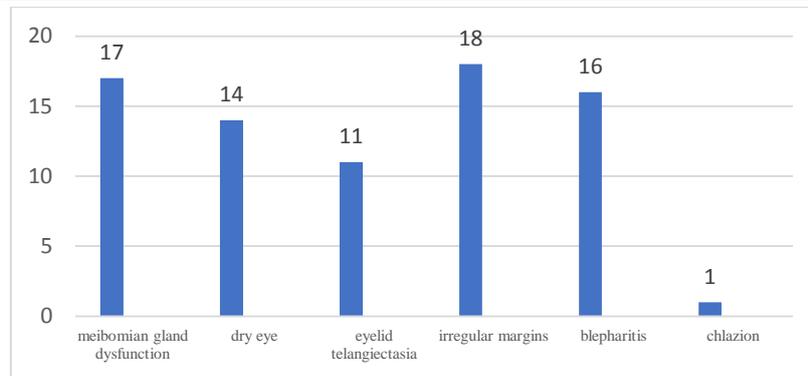


Figure 2 Showing eyelid involvement in ocular rosacea

Conjunctival involvement was seen in form of hyperaemia. Corneal involvement was seen in 5 patients (pannus formation was seen in two, corneal scarring .vascularization and thinning was seen in one patient (Figure 3). Inferior punctate keratitis was seen in 4 patients.

Discussion

Rosacea is a chronic inflammatory disorder manifesting as facial erythema ,flushing and telangiectasia with intermittent episodes of inflammation. In 2002, the National Rosacea Society Expert Committee classified rosacea into erythemato- telangiectatic, papulopustular, phymatous and ocular type.^[3] The revised criteria as suggested by global rosacea Panel 2016 suggests that one diagnostic phenotype and two major criteria are required for diagnosis of rosacea.^[4] Ocular rosacea was first described in African American patients in 1986.^[5] Ocular rosacea is seen to follow cutaneous involvement in 53% cases may precede in only 20 percent cases occurs concurrently with cutaneous disease in 27 % cases.^[6] In our study ocular involvement was seen in 31 % of rosacea . Arman et al observed ocular involvement in 30 % of rosacea patients.^[7] Ghanem et al observed ocular involvement in 26 % of patients diagnosed as rosacea by a dermatologist.^[8]

Pathogenesis of ocular rosacea is not well understood. Various factors are hypothesized to play a role in pathogenesis of ocular rosacea. Increased IL-1 α , matrix metalloproteinases, 8,9 tumor necrosis factor (TNF- α), overexpression

of ICAM-1 (intercellular adhesion molecule 1) and HLA-DR, inflammatory in tear film suggest an inflammatory role of ocular rosacea.^[9,10] Presence of bacterial lipases lead to increased free fatty acids which leads to ocular rosacea.^[11,12] Increased expression of cathelicidins leads to increase in vascular endothelial growth factor.^[13] A decreased concentration of group IIA phospholipase A2 in tears is there. Meibomian gland inflammation leads to decreased and altered secretions from the gland leading to insufficient tear film formation blepharitis, keratoconjunctivitis sicca (dry eyes) and chalazia Mean age in our patients was was 44. 28 \pm 9.72 years (age range of 19-62 years) which was slightly less than other studies, where the mean age was 51 -56 years.^[14,15] The younger age of presentation in our study was probably due to overuse of steroids.

In our study there were more number of females (90.3%) but the ocular involvement was seen in 31.4% of total females and 27.2% of total males. Equal ocular involvement has been observed by many researchers.^[8,15] Apkek observed eye involvement to be more in males (1.3:1)^[14]

Careful history is very important in case of ocular rosacea as the symptoms are often non specific e.g., a foreign body, gritty, or dry sensation, burning, tearing, or redness. Frequently, the symptoms are out of proportion to the ocular signs. In our study the commonest ocular symptom was itching (80.6%), followed by burning (74.2%) and redness(38.7%). Barker observed redness of eye in (55.5%) and itching

(50.0%) to be the presenting complaint.^[15] Arman et al reported burning and stinging in all their patients of ocular rosacea followed by redness and photophobia. Itching, blurring of vision, watering, pain and swelling of eyes were the other presenting complaints.^[7]

Ocular rosacea has wide range of eye signs varying from blepharitis to sight threatening conditions like corneal neovascularization, ulcer or perforation.^[8,15,16] There is inflammation of ocular surface and destruction of meibomian glands. Features of ocular surface involvement suggesting rosacea are lid margin telangiectases, interpalpebral conjunctival injection, spade-shaped infiltrates on the cornea, scleritis, and sclerokeratitis. Other non-specific features of ocular rosacea are chalazia, conjunctivitis, crusting on eyelashes, lid margin irregularity, and discontinuity of tear film.^[8,15] In our study lid margin irregularity (58.06%) was commonest eye sign followed by meibomian gland dysfunction (MGD) (54.83%). Other conjunctival signs were dry eye, blepharitis, eye lid telangiectasia and chlazion. Cornea was involved in 5 (16.1%) patients with one patient developing thinning and vascularization of cornea. Apkek also observed eyelid telangiectasia and irregularity to be commonest (81 %) ocular sign followed by MGD in 78 %^[14] Ghanem et al observed much higher corneal involvement (47.2%) with two patients developing glaucoma.^[8] Also they observed MGD in 85.2% and lid margin telangiectasia in 53.4% cases. Oltz et al reported corneal involvement in 33% patients.^[2] Apkek observed corneal ulceration in 5 % cases^[14] The lower rate of corneal involvement in our study could be because maximum patients in our study were referred from dermatology department and presented early. Wise⁷ reported that the most common ocular signs in patients with rosacea from the ophthalmologic clinic were blepharitis (93%), conjunctival hyperemia (80%), and corneal vascularization and infiltrate (67%).^[16] Jenkins et al.¹⁰ reported conjunctival hyperemia (86%), telangiectasia of the lid margin (63%), blepharitis

(47%), and superficial punctate keratopathy (41%).

Timely intervention can control the ophthalmic disease with appropriate therapeutic modalities including topical corticosteroids, topical cyclosporine and systemic doxycycline.

Conclusion

Ocular rosacea is an under diagnosed entity. Regular ophthalmologic examination should be done in every patient of rosacea. Timely diagnosis and treatment can prevent the sight threatening complications

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