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Original Research

Assessment of dry eyes syndrome in post-menopausal women

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***ABSTRACT*:**
Background: Dry eye disease (DES) is a major tear deficiency disorder which causes discomfort, visual disturbances, and tear film instability. The present study was conducted to assess prevalence of dry eyes in post-menopausal women. **Materials & Methods:** 84 post-menopausal women with complaint of itching in eyes in the department of Opthalmology were studied. **Results:** Age group 45-50 years had 14, 50-60 years had 30 and >60 years had 40 patients. Unilateral and bilateral involvement in age group 45-50 years was seen in 6 and 8, 50-60 years had 16 and 14 and >60 years in 22 and 18 respectively. Common risk factors in subjects were contact lens in 34, allergy in 20, keratitis in 12, use of drugs in 18. The difference was significant (P< 0.05). **Conclusion:** Dry eyes in post-menopausal women is quite high, hence these subjects should be routinely examined.
Key words: Dry eyes, post-menopausal women, Keratitis

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INTRODUCTION

Dry eye was defined as a disorder of tear film due to tear deficiency or excessive evaporation, which causes damage to the interpalpebral ocular surface and is associated with symptoms of discomfort. Dry eye disease (DES) is a major tear deficiency disorder which causes discomfort, visual disturbances, and tear film instability with potential damage to the ocular surface. An unstable tear film inadequately supports the health of the ocular surface epithelium, promoting ocular surface inflammation and stimulates ocular pain.[1]

The tear film and ocular surface forma complex and stable system that can lose its equilibrium through multiple disturbing factors. Despite the gain in knowledge of pathogenic factors of DES acquired in the past decades, there has been considerable discrepancy in the reported prevalence worldwide, mainly due to lack of consensus on appropriated diagnostic criteria and differences in the parameters and research methodology applied.[2]

Various studies have shown that postmenopausal dry eye is clearly not limited to aqueous deficiency and inflammatory changes of the ocular surface and lacrimal gland. Oestrogen deficiency may lead to sebaceous gland alteration, so further destabilization of the tear film occurs due to meibomian gland dysfunction.[3]

Studies have shown that oestrogen receptor mRNA are present in the lacrimal gland, meibomian gland, lids, palpebral and bulbar conjunctiva, cornea and other anterior ocular surfaces.[4] Their presence in the ocular structures and the observation that dry eye syndrome is prevalent in the menopausal and perimenopausal population implies that tear film function is under a complex hormonal influence. Most common symptoms in patients attaining menopause are hot flushes, mood fluctuations, vaginal dryness, and night sweats.[5] The present study was conducted to assess prevalence of dry eyes in post menopausal women.

MATERIALS & METHODS

The present study was conducted among 84 post menopausal women with complaint of itching in eyes in the department of Opthalmology. All subjects were informed regarding the study and written consent was obtained.

Ethical clearance was taken from institutional ethical committee.

General information such as name, age, gender etc. was recorded. History of allergy to excessive wind, sunlight, high temperature, air, pollution, drug etc. was obtained. All subjects were subjected to a 13 point 'Dry Eye Questionnaire. Tear film test by slit lamp was performed. Local anesthesia, Fluorescein strips and Slit lamp 90 D fund us examination (UV light) were also used. Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Age wise distribution of patients

Age group (Years)	Number	P value
45-50	14	0.02
50-60	30	
>60	40	

Table I shows that age group 45-50 years had 14, 50-60 years had 30 and >60 years had 40 patients. Table II, graph I shows that unilateral and bilateral involvement in age group 45-50 years was seen in 6 and 8, 50-60 years had 16 and 14 and >60 years in 22 and 18 respectively. The difference was significant (P< 0.05). Table III shows that common risk factors in subjects were contact lens in 34, allergy in 20, keratitis in 12, use of drugs in 18. The difference was significant (P< 0.05).

DISCUSSION

The National Eye Institute on Clinical Trials in Dry Eyes defined dry eye as "a disorder of the tear film due to tear deficiency or excessive tear evaporation, which causes damage to the inter-palpebral ocular surface and is associated with symptoms of ocular discomfort".[6] It refers to a heterogenous group of conditions all characterized by inadequate lubrication of ocular surface. Although it may sound like a minor annoyance, dry eye is a potentially serious and chronic condition. It may severely limit a person's activity, and in extreme cases, cause blindness.[7] The present study was conducted to assess prevalence of dry eyes in post menopausal women.

In present study, age group 45-50 years had 14, 50-60 years had 30 and >60 years had 40 patients. Pujari et al[8] assessed the prevalence of dry eye in postmenopausal women to prevent complications by early detection and management. Hundred postmenopausal women were categorized based on age of the patients into three groups: Group 1: 45-55 years, Group 2: 55-65 years, Group 3: 65-75 years. They were also classified based on: 1.Occupation, 2.Rural/urban dwelling, 3. Laterality of dry eye. Most commonly dry eye manifested in 65-75 years age group(66.6)%, and more commonly seen in rural population(65%), and in people with outdoor occupation in all age group, and bilateral in all age group.

Table II Involvement of eyes based on age group

Age group (Years)	Unilateral	Bilateral	P value
45-50	6	8	0.03
50-60	16	14	
>60	22	18	

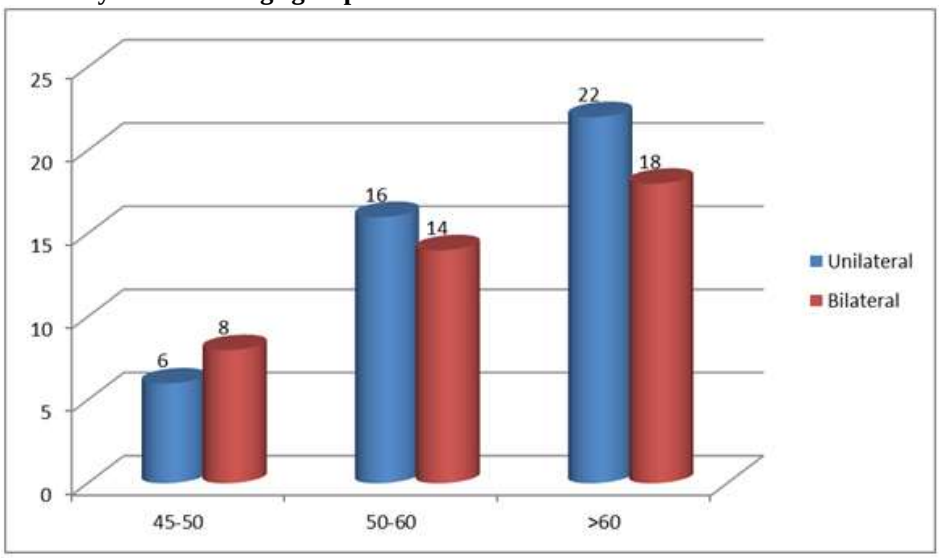
We found that unilateral and bilateral involvement in age group 45-50 years was seen in 6 and 8, 50-60 years had 16 and 14 and >60 years in 22 and 18 respectively. Choudhary et al[9] in their study found that out of 1178 patients, 114 patients were found to have dry eye. In this study, the prevalence of dry eye in hospital-based population in eastern Madhya Pradesh was 9.6%. Dry eye was more common in women (66.6%). Most patients in this study belonged to rural background (60.5%). Air pollution (33.3%) was found to be the most common attributable risk factor affecting most of the farmers/laborers (33.4%). In this study 43.8% patients had moderate and 39.6% patients had mild grade of dry eye.

We observed that common risk factors in subjects were contact lens in 34, allergy in 20, keratitis in 12, use of drugs in 18. Moss et al[10] found that maximum number of patients having dry eyes ; i.e.7; had a duration of menopause ranging from 1- 5 years and 11-15 years. Minimum number of patients having dry eyes, i.e. 3, had a duration of menopause ranging from 6-10 years and >21 years. They did not find a significant relation between the duration of menopause and occurrence of dry eye.

Table III Risk factors in dry eyes

Risk factors	Number	P value
Contact lens	34	0.04
Allergy	20	
Keratitis	12	
Drugs	18	

Graph I Involvement of eyes based on age group



Several patients showed overlap of symptoms. Maximum number of cases complained of scratchiness (33 patients), followed by burning (32 patients), grittiness (23 patients), dryness (18 patients) and soreness (16 patients), respectively. Maximum number of controls complained of burning (28 patients), followed by scratchiness (22 patients), dryness (21 patients), soreness (12 patients) and grittiness (11 patients), respectively.

Lin et al[11] found in their study of evaluation of the clinical course of dry eye syndrome that, 80.4 % of patients were females. Gayton JL[12] in his study, 'Etiology, prevalence and treatment of dry eye disease', reported that dry eye is frequent in elderly patients and women, especially menopausal and post menopausal women.

CONCLUSION

Authors found that dry eyes in post menopausal women is quite high, hence these subjects should be routinely examined.

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