



## International Journal of Allied Medical Sciences and Clinical Research (IJAMSCR)

IJAMSCR | Volume 7 | Issue 2 | Apr - Jun – 2019  
www.ijamscr.com

ISSN:2347-6567

Research article

Medical research

### Correlation between squamous blepharitis and scalp dandruff

Kisshore Kumar G (3<sup>rd</sup> Year MBBS), Dr.C.XavierJayaseelan

Department Of Ophthalmology, Saveetha Medical College & Hospital, Chennai, Tamilnadu, India.

\*Principal Investigator: Kisshore Kumar G

\*Corresponding author: Dr.C.Xavier Jayaseelan

#### ABSTRACT

##### Background

Blepharitis is one of the most common ocular conditions for which the patient visits the ophthalmologist. This study was conducted with objective to determine the correlation between Squamous Blepharitis and Scalp Dandruff in patients presenting to the Outpatient Department (OPD) of Ophthalmology, Saveetha Medical College & Hospital, Chennai.

##### Methods

A hospital based cross-sectional study was carried out from January 2019 to march 2019 among 188 patients with squamous blepharitis. Data was collected by examination of the study subject by ophthalmologist & if necessary by dermatologist after taking informed consent.

##### Results

The study shows that there is a significant association between scalp dandruff and squamous blepharitis. Among the study subjects (those who are having squamous blepharitis), a higher proportion of female (24.4%) were found to have scalp dandruff when compared to male (17.0%). The p value shows there is significant association between scalp dandruff and squamous blepharitis among the age groups (**p value – 0.007**) but there is no significant association between scalp dandruff and squamous blepharitis among the sex (**p value - 0.88**).

##### Conclusion

This study revealed that scalp dandruff was one of the important cause for the squamous blepharitis and it is one of the common ocular condition for which the patient consults the Ophthalmologist. Early detection of seborrheic scalp infection, usually the source of lid-margin infection, has been helpful in the prevention & treatment of the related blepharitis.

#### INTRODUCTION

Blepharitis is one of the most common ocular conditions characterized by redness, scaling inflammation and crusting of the eyelid margin and it is a common cause of discomfort and irritation

among people of all ages, ethnicity and sex. The term blepharitis:-**blepharon** means the eyelids & **itis** refers to inflammation. This is a sub-acute or chronic inflammation of the eye-lid margins, appearing as a simple hyperaemia or as a true inflammation [19, 20], which may occur in two

forms: anterior & posterior. The anterior may be (i) **seborrhoeic (or) squamous** & (ii) ulcerative and sometimes occasionally, parasite causes blepharitis - blepharitisacarica due to demodexfolliculorum and phthiriasispalpebrarum due to the crab louse, very rarely to the head louse & other diseases or condition that lead to blepharitis are: rosacea, herpes simplex dermatitis, varicella-zoster dermatitis, molluscumcontagiosum, allergic dermatitis, contact dermatitis. It can also be divided into the following clinical types: (i) bacterial blepharitis, (ii) seborrhoeic or squamous blepharitis, (iii) mixed staphylococcal with seborrhoeicblepharitis, (iv) posteriorblepharitis or meibomitis and (v) parasitic blepharitis. Almost any inflammatory condition which affects the skin in general may attack the eyelids and oedema of the lids are common due to the looseness of the subcutaneous tissue. In general, blepharitis is not a sight-threatening condition, but if left untreated it has the potential to cause keratopathy, ulceration, chronic conjunctivitis and permanent alteration in eyelid anatomy [16-18].

Seborrheic Dermatitis (SD) and dandruff are common dermatological problems that affect the seborrheic areas of the body. They are considered the same basic condition sharing many features and responding to similar treatment, differing only in locality and severity. Dandruff is restricted to the scalp, and involves itchy, flaking skin without visible inflammation. Seborrheic Dermatitis affects the scalp as well as face, retro-auricular area & the upper chest, causing flaking, scaling, inflammation and pruritus, and can have marked erythema. Flaking in Seborrheic Dermatitis and dandruff is usually white-to-yellowish, and may be oily or dry. It is estimated that Seborrheic Dermatitis and dandruff combined affect half of the adult population. Despite such high prevalence, their etiology is not well understood. Various intrinsic and environmental factors, such as sebaceous secretions, skin surface fungal colonization, individual susceptibility, and interactions between these factors, all contribute to the pathogenesis and it is considered as one of the etiology for seborrheicblepharitis [1]. Although there are many studies available on blepharitis, a very few hospital-based studies are available on squamous

blepharitis. With this background, the present study was designed to estimate the correlation between squamous blepharitis and scalp dandruff in The **Out-Patient Department of Ophthalmology at Saveetha Medical College & Hospital, Chennai** [2-5].

## METHODOLOGY

A hospital based cross-sectional study was conducted in the Outpatient Department (OPD) of Ophthalmology Dept, Saveetha Medical College & Hospital, Chennai from January 2019 to March 2019. All the patients attending Ophthalmology OPD on working days during the study period were included in the study by convenient sampling method. The uncooperative and those who were not interested were excluded from the study. A total of 188 patients with squamous blepharitis formed the study population [10-15].

Ethical clearance was obtained from the Institutional Ethics Committee of the college before conducting the study. Informed verbal consent was taken from the participants or guardian of the study participants. Data like name, age, sex, socio-demographic profile was collected from the study participants or from their guardians. All the patients were examined by ophthalmologists and wherever necessary, dandruff of scalp was confirmed by the dermatologist. The information and presenting features like scales at the lid margin, irritation, discomfort and falling of eyelashes, etc was recorded by examination of the study subject. The collected data was entered onto the excel sheet and it was analysed by appropriate statistical methods by using spss software and the p value was identified [6-9].

## RESULTS

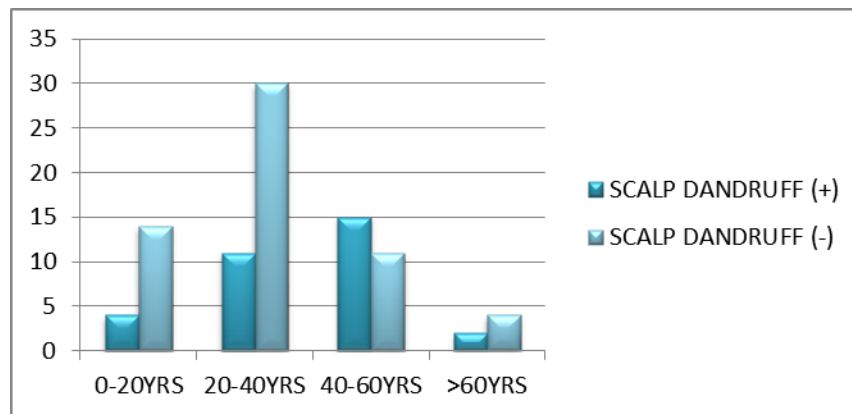
A total of 188 patients with squamous blepharitis were chosen. Out of total study population, the population of **males (48.4%)** and females **(51.5%)** in the **ratio 1:1.06**. 188 study subjects who had squamous blepharitis are grouped under 4 categories: 1.Category 1 (0-20years)-17.6%, 2.Category 2 (20-40years)-47.3%, 3.Category 3 (40-60years)-28.7%, 4.Category 4

(>60years)-6.4%. Further the category was sub classified to **MALES** and **FEMALES** and among them presence and absence of scalp dandruff was identified. **Out of the 188 subjects with**

**squamous blepharitis, 78 were found to have scalp dandruff and it was confirmed by dermatologist.**

### DISTRIBUTION AMONG MALE

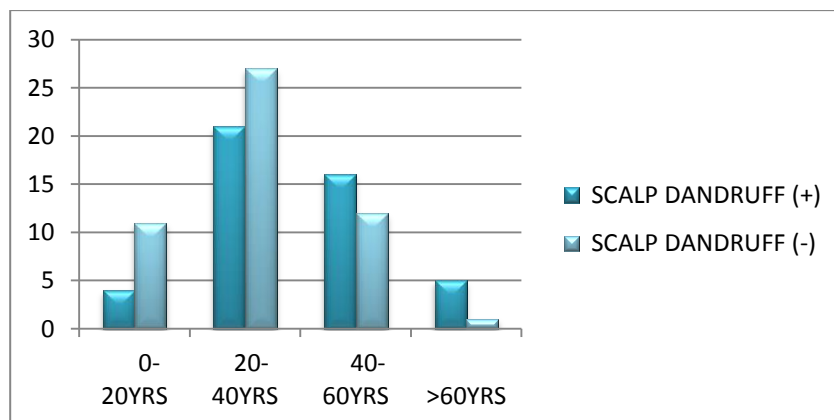
RISK FACTOR	0-20YRS	20-40YRS	40-60YRS	>60YRS	TOTAL
SCALP DANDRUFF (+)	4	11	15	2	32
SCALP DANDRUFF (-)	14	30	11	4	59
TOTAL	18	41	26	6	91



**This Figure Illustrates That How Many Male Subjects (Squamous Blepharitis Patients) Were Having Scalp Dandruff**

### DISTRIBUTION AMONG FEMALE

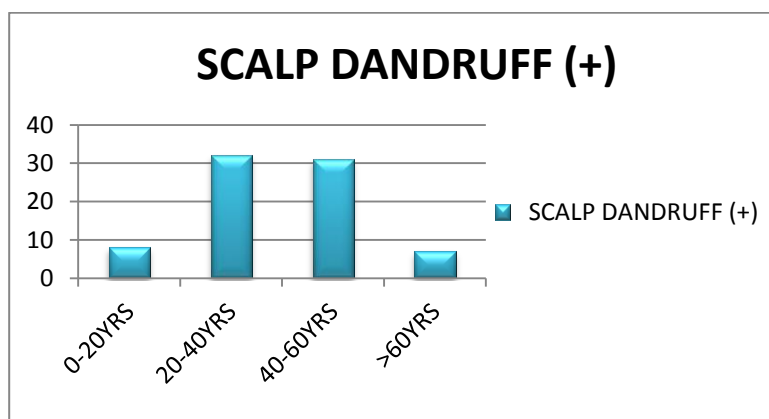
RISK FACTOR	0-20YRS	20-40YRS	40-60YRS	>60YRS	TOTAL
SCALP DANDRUFF (+)	4	21	16	5	46
SCALP DANDRUFF (-)	11	27	12	1	51
TOTAL	15	48	28	6	97



**This Figure Illustrates That How Many Female Subjects (Squamous Blepharitis Patients) Were Having Scalp Dandruff**

## DISTRIBUTION AMONG AGE GROUPS

RISK FACTOR	0-20YRS	20-40YRS	40-60YRS	>60YRS	TOTAL
SCALP DANDRUFF (+)	8	32	31	7	78
SCALP DANDRUFF (-)	25	57	23	5	110
TOTAL	33	89	54	12	91



**This Figure Illustrates Distribution of Scalp Dandruff among Squamous Blepharitis Patients**

No. of cases positive for scalp dandruff between 0-20 years of age: 8 out of 33 patients.

No. of cases positive for scalp dandruff between 20-40 years of age: 32 out of 89 patients.

No. of cases positive for scalp dandruff between 40-60 years of age: 31 out of 54 patients.

No. of cases positive for scalp dandruff between >60 years of age: 7 out of 12 patients.

Among the study subjects (those who are having squamous blepharitis, a higher proportion of **female (24.4%)** were founded to have scalp dandruff when compared to **male (17.0%)**. **The p value shows there is** significant association between scalp dandruff and squamous blepharitis among the age groups (**p value – 0.007**) but there is no significant association between scalp dandruff and squamous blepharitis among the sex (**p value - 0.88**).

## DISCUSSION

Squamous blepharitis -primarily, it is a anterior blepharitis and it is usually associated with seborrhea of scalp (dandruff) & it is often essentially metabolic. It is characterized by

deposition of whitish-materials (soft scales), irritation, discomfort, sometimes watering, falling of eyelashes and thickening of lid margins. If the scales are removed the underlying surface is found to be hyperaemic but not ulcerative which is used to differentiate from the staphylococcal type where the base of it bleeds easily & ulcers covered by yellow crusts at the root of the cilia. The p value shows that there is significant association between scalp dandruff and squamous blepharitis among the age groups but there is no significant association between scalp dandruff and squamous blepharitis among the sex.

## CONCLUSION

This study revealed that scalp dandruff was one of the important cause for the squamous blepharitis and it is one of the common ocular condition for which the patient consults the ophthalmologist. Early detection of seborrheic scalp infection, usually the source of lid-margin infection, has been helpful in the prevention & treatment of the related blepharitis.

## REFERENCE

- [1]. Phillips Thygeson and Daniel G. Vaughan, Jr. Seborrheic blepharitis. *Trans Am Ophthalmol Soc.* 52, 1954, 173–188.
- [2]. Ramanjit Sihota and Radhika Tandon. *Parsons' Diseases of the eye*, 22/e. ISBN: 978-81-312-3818-9
- [3]. A K Khurana. *Comprehensive ophthalmology*, 8/e. ISBN: 978-93-5270-686-0
- [4]. Taliana Freitas Bernardes & Adriana Alvim Bonfili. Blepharitis, *Seminars in Ophthalmology*, 25(3), 2010, 79-83, DOI: 10.3109/08820538.2010.488562
- [5]. Luis J. Borda and Tongyu C. Wikramanayake. Seborrheic Dermatitis and Dandruff: A Comprehensive Review. 2015, doi: 10.13188/2373-1044.1000019
- [6]. Kristina Lindsley Sueko Matsumura,<sup>1</sup> Elham Hatef,<sup>2</sup> and Esen K Akpek. Interventions for chronic blepharitis. 2012, 16. doi: 10.1002/14651858.CD005556.pub2
- [7]. Deganit Barak-Shinar, PhD and Lawrence J. Green, MD. Scalp Seborrheic Dermatitis and Dandruff Therapy Using a Herbal and Zinc Pyrithione-based Therapy of Shampoo and Scalp Lotion. 11(1), 2018, 26–31.
- [8]. E. Bonnar S. Dowling P. Eustace. A Survey of Blepharitis in Pre-operative Cataract Patients. [https://doi.org/10.1016/S0955-3681\(13\)80189-X](https://doi.org/10.1016/S0955-3681(13)80189-X)
- [9]. Hom MM, Martinson JR, Knapp LL, Paugh JR. Prevalence of Meibomian gland dysfunction. *Optom Vis Sci.* 67(9), 1990, 710–720.
- [10]. Sulzberger, M. B., and J. Wolf, *Dermatologic Therapy in General Practice*. Chicago, The Year Book Publishers, Inc. 3d ed., 1948.
- [11]. Gots, JSP. Thygeson, and M. Weisman, Observations on P. ovale in seborrheic blepharitis and conjunctivitis, *Am. J. Ophth.*, 30, 1947, 1484-1494.
- [12]. Martin-Scott, I., The Pityrosporum ovale, *Brit. J. Dermatol.*, 64, 1952, 257.
- [13]. Slinger, W. N., and D. M. Hubbard, Treatment of seborrheic dermatitis with a shampoo containing selenium disulfide, *Arch. Derm.* 9. Syph. 64, 1951, 41.
- [14]. Bahl, G. C., Management of seborrheic blepharitis. Paper given at Southern Medical Association meeting, Atlanta, Ga., Oct. 27, 1953. Cited by Osterberg
- [15]. Grimalt R. A practical guide to scalp disorders. *J Invest Dermatol Symp Proc.* 12(2), 2007, 10–14.
- [16]. Schwartz JR, Messenger AG, Tosti A, et al. A comprehensive pathophysiology of dandruff and seborrheic dermatitis - towards a more precise definition of scalp health. *Acta Derm Venereol.* 93(2), 2013, 131–137.
- [17]. Bergbrant IM. Seborrheic dermatitis and Pityrosporum yeasts. *Curr Top Med Mycol.* 6, 1995, 95–112
- [18]. Dawson TL, Jr. Malassezia globosa and restricta: breakthrough understanding of the etiology and treatment of dandruff and seborrheic dermatitis through whole-genome analysis. *J Invest Dermatol Symp Proc.* 12(2), 2007, 15–19.
- [19]. Piérard-Franchimont C, Goffin V, Decroix J, Piérard GE. A multicenter randomized trial of ketoconazole 2% and zinc pyrithione 1% shampoos in severe dandruff and seborrheic dermatitis. *Skin Pharmacol Appl Skin Physiol.* 15(6), 2002, 434–441.
- [20]. PUTNAM C. Diagnosis and management of blepharitis: an optometrist's perspective. DOI <https://doi.org/10.2147/OPTO.S84795>.

**How to cite this article:** Kisshore Kumar G (3rd Year MBBS), Dr. C. Xavier Jayaseelan. Correlation between squamous blepharitis and scalp dandruff. *Int J of Allied Med Sci and Clin Res* 2019; 7(2): 380-384.

**Source of Support:** Nil. **Conflict of Interest:** None declared.