ASIAN JOURNAL OF PHARMACEUTICAL AND CLINICAL RESEARCH

INNOVARE ACADEMIC SCIENCES
Knowledge to Innovation

Vol 17, Issue 7, 2024

Online - 2455-3891
Print - 0974-2441

Research Article

HERPES SIMPLEX KERATITIS IN A TERTIARY CARE CENTRE: A CLINICAL PRESENTATION

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Received: 14 March 2024, Revised and Accepted: 26 April 2024

ABSTRACT

Objectives: The objectives of the study are (1) to evaluate the demography of herpes simplex keratitis and (2) to determine the incidence of various forms of herpes simplex keratitis. In developing countries, bacterial and fungal keratitis are the most common cause of keratitis. Hence, the epidemiology of herpes simplex keratitis is not well studied. The present study aims to study the epidemiology of herpes simplex keratitis.

Methods: It is a prospective study of herpes keratitis patients at a tertiary care center. The study was conducted on 50 patients who presented in the tertiary care center from January 1, 2021, to August 30, 2021. Detailed history, slit-lamp examination, fluorescein staining, corneal sensations, and other needful investigations were carried out. The diagnosis was made clinically.

Results: Males (60%) were affected more than females (40%). Most of the patients were between the ages of 30 and 50. The order of most common presentation is epithelial keratitis (60%), stromal keratitis (34%), endotheliitis (4%), and mixed stromal and epithelial keratitis (2%). The majority of the patients had mild visual impairment (60%).

Conclusion: Herpes simplex keratitis presented mostly in the 3rd–5th decade. In comparison to females, it is more common among males. The order of presentation observed was epithelial keratitis followed by stromal keratitis followed by endotheliitis followed by mixed stromal and epithelial keratitis. The majority of the patients presented with mild visual impairment.

Keywords: Herpes simplex keratitis, Epidemiology, Incidence, Demography, Ocular herpes, Epithelial keratitis, Stromal keratitis, Endotheliitis.

 DOI: http://dx.doi.org/10.22159/ajpcr.2024v17i7.50864. Journal homepage: https://innovareacademics.in/journals/index.php/ajpcr

INTRODUCTION

Herpes simplex keratitis in developed countries is a common ocular infection with a global incidence of about 1.5 million. Herpes simplex virus (HSV)-1 is the subtype associated with ocular pathology [1-3]. It is among the primary factors that result in blindness and visual morbidity. The cause lies in the fact that HSV undergoes latency in sensory ganglion which causes a recurrent disease due to reactivation [4]. Recurrent infection is responsible for corneal scarring which leads to corneal opacity and hence visual morbidity. In developing countries, the prevalence of bacterial and fungal keratitis is more than herpetic keratitis. There are studies estimating the incidence of bacterial and fungal keratitis [5,6]. Moreover, the epidemiology of herpes simplex keratitis is not well studied and defined [1,4,7].

HSV can affect the cornea in the epithelium, stroma, or endothelium in the form of epithelial keratitis, stromal keratitis, and endotheliitis, respectively. Both epithelium and stroma can also be affected.

Objectives

1. To evaluate the demography of herpes simplex keratitis
2. To determine the incidence of various forms of herpes simplex keratitis.

MATERIALS AND METHODS

It is a prospective study of herpes keratitis patients at a tertiary care center. The study was conducted on 50 patients who presented in the tertiary care center from January 1, 2021, to August 30, 2021.

Inclusion Criteria

1. All the corneal ulcers due to herpes simplex keratitis.

Exclusion Criteria

1. All the corneal ulcers and scarring due to etiologies other than herpes simplex keratitis.

METHODOLOGY

1. The institutional ethics committee approval was obtained and informed consent was taken from each patient.
2. All the patients diagnosed with herpes simplex keratitis in the cornea clinic were included in the study.
3. Detailed history was taken concerning the history of trauma and history of previous similar episodes and skin lesions in the past.
4. Detailed examination in the form of slit-lamp examination, fluorescein staining, corneal sensations, and other necessary investigations was carried out

The data are compiled using Google Sheets and are written in Google Docs.

RESULTS

Males (60%) were affected more than females (40%) (Table 1).

The majority of the patients (70%) were in the age group 30–50 (Fig. 1).

Various presentations the patients presented with are epithelial keratitis (60%), stromal keratitis (34%), mixed stromal and epithelial keratitis (2%), and endotheliitis (4%) (Fig. 2).

Visual acuity at presentation observed was as follows: 30 cases (60%) had visual acuity of 6/6–6/18; 11 cases (22%) had visual acuity of 6/24–6/60; and 9 cases (18%) had visual acuity of <6/60–3/60 (Fig. 3).

Table 1: Sex distribution

	Number	Percentage
Males	30	60
Females	20	20

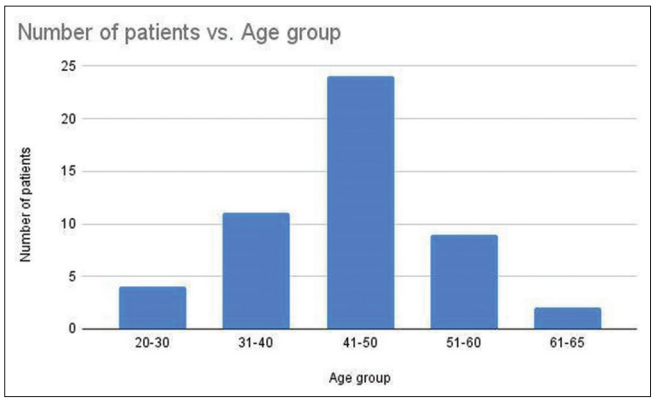

Fig. 1: Age group

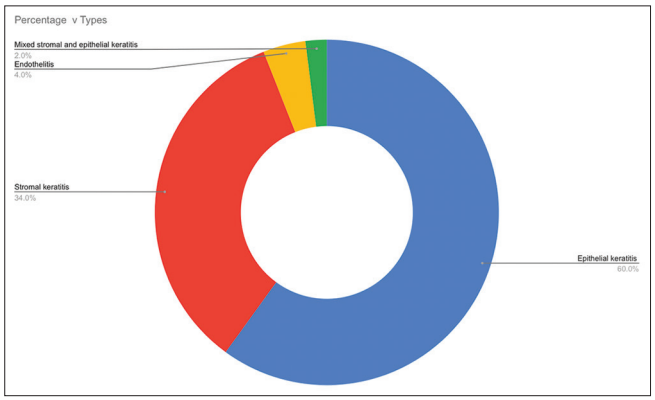

Fig. 2: Doughnut chart representing variation in presentation of herpes simplex keratitis (in %)

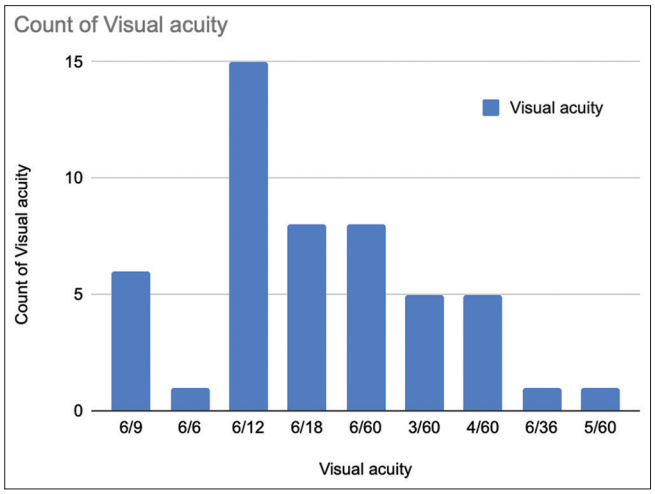

Fig. 3: Representation of visual acuity at presentation

DISCUSSION

The study included 50 patients. The mean age at presentation was 44.42 years. The mean age of females and males is 49.3±6.12 years and 41.16±9.16 years, respectively. This concludes that the age of presentation is similar in males and females in the current study. Similarly, Das *et al.* [8] concluded that the most commonly affected age group was between the 3rd and 5th decades. As per Kabra *et al.* [1], the mean age was 32 years in males and 29 years in females. According to Chaudhary *et al.*, the mean age of presentation was 36.63±16.94 years. According to Liesegang *et al.* [4], the mean age was 37.4 years.

The male-to-female ratio in the current study is 3:2. Similar findings were present in Abha Sinha *et al.* [9] and Kabra *et al.* [1]. Similar findings were found in Das *et al.* [8] with male: female ratio (64.61%:35.39%).

In the present study, epithelial keratitis was the most common lesion (60%) followed by stromal keratitis (34%). Similar findings were found in a study done in South India by Pramod *et al.* [10] (epithelial – 44.4% and stromal – 14.8%) and Labetoulle *et al.* [11].

In contrast, Das *et al.* [8] concluded that stromal keratitis is most common followed by epithelial keratitis followed by endotheliitis. Shah *et al.* [7] reported stromal keratitis as the most common lesion. According to Kabra *et al.* [1], the order of most common presentation was stromal followed by epithelial and stromal lesions followed by endotheliitis. Chaudhary *et al.* [12] also concluded that stromal keratitis is the most common presentation.

A variation from other studies is observed in the current study with the most common type being epithelial keratitis. Moreover, similar results were also seen by another study in south India which may indicate that epithelial keratitis is the most common presentation in this part of India. However, the sample size is less to solidify this finding. Further research is suggested to reinforce the result.

The majority of the cases presented with mild visual impairment. This may be because the majority of the presentation was of the epithelial type. Chaudhary *et al.* [12] observed a similar result with the most common visual acuity in the range of 6/6–6/18.

Limitations

The sample size and the duration of the study period are less.

CONCLUSION

In the current study, herpes simplex keratitis presented mostly in the 3rd–5th decade. It is more common in males in comparison to females. The order of presentation observed was epithelial keratitis followed by stromal keratitis followed by endotheliitis followed by mixed stromal and epithelial keratitis. The majority of the patients presented with mild visual impairment.

ACKNOWLEDGMENTS

Nil.

CONFLICT OF INTEREST

Nil.

AUTHORS FUNDING

Nil.

AUTHORS CONTRIBUTION

Gompa Mohana Preethi- concept, approach, diagnosis, and management

Diksha Panchbhai- work up, follow-up, compilation, data analysis, and manuscript preparation

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