



CLINICAL PROFILE OF VKC PATIENTS PRESENTING AT A TERTIARY CARE HOSPITAL IN RAJOURI, J&K, INDIA

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ABSTRACT

Background: Vernal keratoconjunctivitis is a chronic, recurrent, bilateral, inflammatory disease showing exacerbations during the spring and summer seasons, and is a common cause of ocular morbidity in young children living in tropical countries.

Materials and Methods : A retrospective study was carried out in the Department of Ophthalmology at Government Medical College, Rajouri, J&K, India. A total of 120 patients with VKC were diagnosed on the grounds of their history, the presence of characteristic symptoms, and on the basis of their clinical features, over a period of 5 months from January 2019 to May 2019. The history of each patient was taken, including a record of age, sex, place of residence, age at onset of the disease, seasonal variations, associated allergic or "atopic" illnesses, and family history of VKC or associated allergies.

Results: A total of 120 patients were examined, out of which 93(77.5%) were males and 27(22.5%) were females. The maximum percentage of the patients were in the age group 11-15 years(47.5%), followed by the age group 5-10 years(28.33%) and the least no. of patients were in the age group 21-25 years(6.6%). A total of 94(78.33%) patients had papillae on the upper palpebral conjunctiva, 41(34.16%) patients had conjunctival congestion. Limbal Papillae were seen in a total of 37(30.83%) patients followed by SPK's(24.16%) and Horner Tranta's Spots(15%). Out of the total of 120 patients, majority of patients were not having any associated allergic conditions.

Conclusions: VKC is the most common form of allergic conjunctivitis and occurs in Males of 11-15 years of age. Some patients of VKC had history of atopy and other allergic conditions.

KEYWORDS : Atopy, bulbar, palpebral, papillae, vernal keratoconjunctivitis

INTRODUCTION

Vernal keratoconjunctivitis (Vernal: Latin, Spring) is a chronic, recurrent bilateral inflammation of conjunctiva affecting mainly young males in the first decade of life^[1]. Patients of VKC commonly presents with complaints of severe itching and photophobia accompanied by ocular discomfort and lacrimation^[2]. It is a chronic ocular allergy that affects mostly children and adolescents living in warm or hot climatic conditions, primarily affecting boys more than girls in the first decade of life around the age of 7 years. The male:female ratio observed is 2.3:1.^[3] The disease is common in spring and autumn seasons and is usually seen after the age of 5 years and resolves around puberty, only rarely persisting beyond the age of 25 years.^[4] The clinical course of Vernal Keratoconjunctivitis is usually self-limiting, with vision in most children remains normal but sight threatening complications may manifest with increasing severity. VKC is characterized by the presence of papillary hypertrophy of the palpebral and/or the limbal conjunctiva, bulbar conjunctival pigmentation, limbal thickening and Horner Trantas dots. It is associated with itching, redness of eyes, lacrimation and mucous discharge. Inflammation of bulbar conjunctiva is variable but aropy discharge can be found in the inferior fornix. The clinical course of VKC has seasonal as well as geographical variations. Our study was aimed to determine the clinical profile of patients with VKC in Rajouri region of J&K, India.

MATERIALS AND METHODS

The present study is a hospital based, retrospective study carried out on 120 patients, over a period of 5 months from January 2019 to May 2019, who attended the outpatient department of Government Medical College and associated hospitals, Rajouri, J&K, India. A verbal informed consent was taken from all the patients.

The required data including the age and sex of patient, place of residence, age of onset of disease, associated allergies, seasonal variations and family history of VKC was collected

from a total of 120 patients with VKC who were diagnosed on the grounds of their history, the presence of characteristic symptoms and the associated clinical features. BCVA for each patient was assessed and each patient was thoroughly examined with a slit lamp. Follow-up was done every 3 weeks for 3 months. Papillae of size > 1mm on upper tarsal conjunctiva with no limbal infiltration marked the palpebral form of VKC. Papillae of < 1 mm on the upper tarsal conjunctiva with limbal infiltration marked the limbal form of VKC. Mixed VKC had features of both limbal and palpebral form.

RESULTS

A total of 120 patients were examined, out of which 93(77.5%) were males and 27(22.5%) were females. Table 2. Shows the sex wise distribution of the VKC patients examined.

As shown in Table 2, The maximum percentage of the patients were in the age group 11-15 years(47.5%), followed by the age group 5-10 years(28.33%) and the least no. of patients were in the age group 21-25 years(6.6%).

Table 1: Age wise distribution of the patients

Age	No. of Patients(%)
5-10	34(28.33%)
11-15	57(47.5%)
16-20	21(17.5%)
21-25	8(6.6%)

Table 2: Gender wise distribution of patients

Gender	No. of Patients(%)
Male	93(77.5%)
Female	27(22.5%)

According to the symptom profile of the patients, as shown in Table 3, 103(85.83%) patients presented to the OPD with symptom Of itching while redness as presenting symptom was seen in 74(61.66%) patients. A total of 48(40%) patients presented with Ropy discharge as the major symptom

followed by symptoms of watering(26.66%) and photophobia(24.16%).

Table 4, depicting the pattern of Ocular Disease shows Palpebral form (64 pts.) as the major pattern of disease followed by Bulbar (30pts.) and mixed (26pts.) patterns of disease.

Table 3: Distribution of Patients by their symptoms

Symptom	
Itching	103(85.83%)
Redness	74(61.66%)
Photophobia	29(24.16%)
Ropy Discharge	48(40%)
Watering	32(26.66%)

Table 4: Distribution Of Patients according to the Pattern Of disease

Pattern Of Disease	
Palpebral	64(53.33%)
Bulbar	30(25%)
Mixed	26(21.66%)

Table 5, describes the various ocular signs. A total of 94(78.33%) patients had papillae on the upper palpebral conjunctiva, 41(34.16%) patients had conjunctival congestion. Limbal Papillae were seen in a total of 37(30.83%) patients followed by SPK's(24.16%) and Horner Tranta's Spots(15%).

Table 5: Distribution according to the presenting Ocular Signs

Ocular Sign	No. of Cases
Papillae on upper palpebral conjunctiva	94(78.33%)
Conjunctival Congestion	41(34.16%)
Limbal Papillae	37(30.83%)
Superficial Punctate Keratitis	29(24.16%)
Horner Tranta's Spots	18(15%)
Pseudogerontoxon	2(1.6%)

Out of the total of 120 patients, majority of patients were not having any associated allergic conditions (101 patients, 84.16%). Table 6, depicts the same.

Table 6: Patient Distribution according to associated allergy

History of allergic disorders	No. of cases
Present	19(15.83%)
Not Present	101(84.16%)

DISCUSSION

Vernal keratoconjunctivitis (VKC) is bilateral, chronic, external ocular inflammatory disorder mainly affecting young boys. It is characterized by the bilateral presence of palpebral and/or bulbar conjunctiva papillae, corneal keratopathy, and mild-to-severe itching. Our study shows male preponderance with 93 males and 27 females with a male- female ratio of 3.44, which is well in concordance with study done by Saboo US et al.^[5] However, a study by Ukponmwan^[6] from Nigeria reported higher ratio of females affected as compared to male (1:1.3).

VKC is usually considered to be a childhood disease and has been found to resolve usually by the age of puberty. A total of 78 patients were seen in the age group 11-20 years, whereas a total of 8(6.6%) were seen in the age group 21-25 years. A hospital-based study done in Pakistan by Shafiq and Shaikh^[7] reported a low prevalence of only 6% of patients with VKC to be above the age of 20 years. Leonardi et al.^[8] in their study also reported only 4% of patients to be more than 20 years of age. However, an Indian study by Saboo et al.^[5] has reported 12% of patients to be above 20 years of age. There is a higher predilection for warm, dry climates, as inflammation trends to decrease in the cooler months of the year. Majority of our patients presented in the months of april-may This is in

agreement with a study conducted by Jivange VS et al.^[8], which reported highest incidence in hot and dry season.

A total of 103(85.83%) patients presented to the OPD with symptom of itching while redness as presenting symptom was seen in 74(61.66%) patients. A total of 48 (40%) patients presented with Ropy discharge as the major symptom followed by symptoms of watering (26.66%) and photophobia (24.16%). Similar findings were found by Bisht R et al.^[9] and Rajappa SA et al.^[10] The immunopathogenesis is multifactorial. Classically, it has been thought of as a type I IgE-mediated hypersensitivity reaction; however, it has been suggested that there is cell-mediated Th2 involvement. The predominant form of VKC seen in our study was the palpebral form (53.33%), followed by bulbar (25%) and mixed (21.66%) forms. Rajappa et al.^[10] found predominance of palpebral form in their study, whereas Kawuma M^[11] reported limbal form (75%) in majority of patients.

Studies by Lambiase et al.^[11] and Bonini et al.^[11a] reported associated systemic allergies in 41.6% patients in different series, whereas associated systemic allergies were seen in 15.83% patients in our study. The mainstay of treatment in VKC is topical pharmacological treatment. The first line of treatment is a topical mast cell stabilizer, antihistamine, or mast cell stabilizer/antihistamine combination (olopatadine or lodoxamide). Steroid use is limited to severe inflammation and corneal shield ulcers to minimize the iatrogenic harm. Cases not responding to steroids can be treated with cyclosporine. Nonsteroidal anti-inflammatory eye drops are used as a safe alternative in mild cases.

CONCLUSION

VKC is a form of allergic conjunctivitis commonly seen in tropical regions affecting young males of age group 11-20 years. Our study spans over a period of 5 months from January 2019 to May 2019 and included the patients presenting to the OPD with the relevant symptoms. It is also summarized that the VKC in this part of India is similar to the typical pattern of VKC seen in rest of country.

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