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A CASE DISCUSSION ON PTERYGIUM

Dr. Radhakrishna Bishwal*[1], Dr. Sanghamitra Samantaray[2] and Dr. Swapnil Singhai[3]

[1]Professor, Dept. of Shalakya Tantra, Uttarakhand Ayurved University, Gurukul Campus, Haridwar.
[2]Associate Professor, Department of Shalya Tantra, SKSS Ayurveda Medical College, Sarabha, Ludhiana.
[3]Professor, Dept. of Kayachikitsa, Uttarakhand Ayurved University, Gurukul Campus, Haridwar.

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Corresponding author: Dr. Radhakrishna Bishwal
Professor, Dept. of Shalakya Tantra, Uttarakhand Ayurved University, Gurukul Campus, Haridwar.
Email ID: ditiayurveda@gmail.com,

ABSTRACT

Pterygium is characterized by a triangular fibrovascular subepithelial in growth of degenerative bulbar conjunctival tissue over the limbus toward the cornea. Multiple factors are known for this abnormal growth of tissue exposure to dust, wind, living in subtropical and tropical climate and ultra violet radiations are responsible for its growth. The prevalence of pterygium was found to be 10.2% in the world, with highest prevalence in low altitude regions. Patients with pterygium present with various complaints, ranging from no symptoms to significant redness, swelling, itching, irritation, and blurring of vision associated with elevated lesions of the conjunctiva and contiguous cornea in one or both eyes. The diagnosis is based on the clinical appearance of the lesion. Medical treatment (artificial tears and lubricants) does not decrease progression or cause regression of pterygium. The purpose of this case study is to determine the *Anjan* therapy is an effective and safe treatment option that can enhance the speed and degree of recovery, minimal risk and high patient acceptance in preference to other methods of treatment of pterygium.

KEYWORDS: Arma, Nayansukh Varti Anjan, Pterygium.

INTRODUCTION

Pterygium comes from the Greek word meaning wing, pterygos. It is a triangular fibro-vascular growth that extends from the conjunctiva toward the cornea. Pterygium is a condition of one or both eyes in which there occurs an elevated growth in the sclera that can invade cornea also in advanced stages. It is more common for the pterygium to present on the nasal conjunctiva and to extend onto the nasal cornea, although it can present temporally, as well as in other locations.

Multiple factors are known for this abnormal growth of tissue exposure to dust, wind, living in subtropical and tropical climate and ultra violet radiations are responsible for its growth. It is also seen associated with dry eyes and allergy of eyes. The prevalence of pterygium was found to be 10.2% in the world, with highest prevalence in low altitude regions. Increased incidence of pterygium is noted in the tropics and in an equatorial zone between 30° north and south latitudes. Higher incidence is associated with chronic sun exposure (ultraviolet light), older age, male sex, and outdoor activity. Although the pathophysiology is not clearly understood, ultraviolet (UV) light is identified as the most important risk factor. UV light forms free radicals that induce damage in DNA, RNA, and the extracelluar matrix of cells. Ultraviolet-B (UVB) induces expression of cytokines and growth factors in pterygial epithelial cells. Polymorphisms of the DNA break repair gene Ku70 have been associated with genetic predisposition to pterygium development. Increased levels of T-cells and inflammatory markers have also been noted in pterygial tissue compared to normal conjunctival tissue. Risk factors for pterygium includes increased exposure to ultraviolet light, including living in subtropical and tropical climates, engaging in occupations that require outdoor activities, exposure to irritants (dust, sand, wind), dry ocular surface and a genetic predisposition to the development of pterygium appears to exist in certain families. Patients with pterygium present with various complaints, ranging from no symptoms to significant redness, swelling, itching, irritation, and blurring of vision associated with elevated lesions of the conjunctiva and contiguous cornea in one or both eyes. The diagnosis of pterygium is based on the clinical appearance of the lesion. Typical findings include - Fibrovascular conjunctival growth within the palpebral fissure extending onto the corneal surface,

triangular shape with the apex, or head, extending onto the cornea, vascular straightening in the direction of the advancing head of the pterygium on the corneal surface. May be a thin translucent membrane or significantly thickened with an elevated mound of gelatinous material. It may affect the nasal and temporal limbus of both eyes or only a single location, raised lesion, white to pink in color depending on vascularity ranges from a fine transparent area with very mild elevation, few vessels, and minimal corneal involvement in the early stages to a thick opaque vascular growth extending to the visual axis in later stages. Pinguecula are often present in the ipsilateral or contralateral eye. A pigmented epithelial iron line (Stocker's line) adjacent to a pterygium is evidence of chronicity. It is unusual for pterygium to deviate from the characteristic locations of three and nine o'clock within the palpebral fissure. Pterygioid lesions in other locations should elevate suspicion for alternate diagnoses.

Diagnosis is made clinically based on slit-lamp examination and typical appearance of the lesion. Prevention of ptyrigium by wearing eye protection, sunglasses, goggles, and/or a brimmed hat is recommended when one is exposed to sunlight or dust. Sunglasses that block 99%–100% of both UVA and UVB rays are preferred. Small pterygium without visual impairment can be treated symptomatically with artificial tears and ocular lubricants. Medical treatment (artificial tears and lubricants) does not decrease progression or cause regression of pterygium. In patients with irritative symptoms, preservative-free artificial tears are recommended for mild inflammation and topical steroids are recommended for moderate inflammation. Monitoring pterygium at 6–12 months is reasonable. Surgical removal is considered in decrease in visual acuity due to astigmatism or encroachment onto visual axis, a cosmetically significant pterygium, when it interferes with contact lens wear, symptomatic degenerative changes like cystic changes, restriction of extraocular movements. Complications of pterygium includes distortion and/or reduction of central vision, redness, irritation and chronic scarring of the conjunctiva and the cornea.

CASE STUDY

History of Present Illness

A 55-year-old male patient presented with significant redness (hyperemia), swelling, blurring of vision, foreign body sensation and itchiness in his right eye without improvement after artificial tears. Past family medical history was non-contributory in this patient. Eyelids of the right eye were within normal limits. The right eye had mild conjunctival hyperemia and a 2.43 mm temporal pterygium without involvement of the papillary area. Ocular examination of the left eye was normal. On physical examination, a wing-shaped vascular thickening could be seen extending from his nasal conjunctiva, across his iris and encroaching on the pupil.

General Physical Examination

Pulse: 88/min
Blood Pressure: Lying- 140/90mm Hg, Standing 3 minutes- 148/92mm Hg

ASSESSMENT

Symptom	Grading			
	0	**1**	**2**	**3**
Irritation in eye	No irritation	Occasional irritation in eye	Irregular irritation in eye	Regular Irritation in eye
Burning Sensation	No burning sensation	Occasional burning sensation	Irregular burning sensation	Regular burning sensation
Redness	No congestion	Occasional congestion	Redness in eyes during external environment	Regular redness in eyes
Foreign body sensation	Absent	Occasionally present	Intermittent present	Continuous present
Blurred vision	Absent	Occasionally present	Frequently present	Continuous present

Length of Pterygium from tip in mm

Treatment Schedule

Nayansukh Varti Anjan in one *Harenu Matra* once a day in the morning.

Ingredients

1. *Pippali churna* – 1 part
2. *Haritaki churna* – 2 part
3. *Jala* – as required

Preparation of *Nayansukh Varti*: *Pippali* and *Haritaki* are taken and crushed in *Khalva Yantra* and added sufficient amount of sterile Water till it become soft in consistency. This is made into *Varti* form of about 2 cm in length and dried in sunshade & preserved in airtight container.

Procedure of *Anjan* - The length of pterygium was measured by instrument name as Castro-veijo Caliper. For *Anjan karma* 'Glass Rod' was used. First the right eye in which *Anjan* was performed was cleaned externally with sterile water. At first lower lid of patient was retracted by left hand and patient was asked to look upward, one *Harenu matra* of *Nayansukh Varti* was applied with glass rod, starting from *Kaninika sandhi* to

Apanga sandhi. Then the patient was asked to close the eyelids and rotate the eyeball so that *Anjan* was applied uniformly. Then patient is asking to blink the eyelids. The vitiated *doshas* was come out in the form of tears. After the tears stops, patient's eye was washed with distilled water and cleaned with sterile cotton.

RESULTS

After completion of treatment, clinical assessment was made from the interrogation and symptoms of the patient. There was a drastic change in the symptoms as:

Symptoms	Before treatment	After 21 days treatment
Irritation in eye	3	0 (No Irritation)
Buring sensation	1	0 (No buring sensation)
Redness	2	0 (No congestion)
Foreign body sensation	2	0 (Absent)
Blurred vision	2	0 (Absent)
Length of Pterygium	2.43mm	Nil

There was significant improvement in overall symptoms of pterygium after 21 days treatment with *Nayansukh varti Anjan* and follow up was done after one month as there is chance of recurrence in pterygium. Irritation in eye, burning sensation, redness and foreign body sensation and blurred vision disappears and the length of pterygium was abolished. There was no side effect observed during the treatment as well as after the completion of treatment.

DISCUSSION

A pterygium can present as any of a range of fibro-vascular changes on the surface of the conjunctiva and the cornea. It can block the vision if it extends up to cornea and covers the pupil. *Nayansukh Varti* contains one part *Pippali* and two part *Haritaki*. *Pippali* is having *Katu Rasa, Madhur vipaka, Anushna veerya* and *laghu, snigdha* in *gunas*. Being *Madhura* and *Sheeta* it is *Kaphaghna* but *Pittakara* being *Katu, Anushna* and *Vatashamaka* being *Madhura Vipaki, Anushna* and Snigdha. Haritaki is having *Pancharasa* with *Kashaya Rasa Pradhana, Ushna Veerya, Madhura Vipak and Laghu, Ruksha Guna*. It is *Tridoshahara* specially *Vatashamaka*.

Katu Rasa of *Pippali* and *Madhura Vipaka* of *Pippali* and *Haritaki, Aampachana* of *Prastari Arma* with local cleaning *Karma* of *Kashaya Rasa* occurs. As a result *Pittaj Dosha Lakshana* redness reduces after treatment. *Snigdha Guna* and *Aamapachna Guna* of *Pippali* reduce the irritation in eye. *Madhura Vipaka* of *Pippali* and *Haritaki* reduces the symptom burning sensation present in pterygium. Foreign body sensation and blurred vision symptoms abolished due to the *Vatakapha Shamaka* properties of *Pippali* and *Haritaki*. Throughout the course of treatment, the length of pterygium reduces and abolished due to *Katu Rasa* of *Pippali* and *Ruksha Guna* of *Haritaki*. In this way *Nayansukh Varti* acts on pterygium.

CONCLUSION

This small case study demonstrates that patient with pterygium can make significant gains in symptoms and length of pterygium in relatively short periods of time. Our intention, however, is to serve as a demonstration of the positive outcomes through the use of a focused, impairment-specific therapy management. It determines the treatments which enhance the speed of recovery, minimal risk with *Anjan* therapy as compared to surgical treatment and long term effectiveness for pterygium. Despite the limitations of this case study, conclude that the therapy may be an effective option in the treatment of pterygium.

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