



Ayurvedic conceptual study of Arma w. s. r. to Pterygium

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Abstract:

In *Ayurveda Samhita Grantha* “Arma” is described under “Shuklagata netraroga”. Arma is a *mamsal vrudhi* [fleshy growth] developing either from *Kaneenika sandhi* [inner canthus] or *Apanga Sandhi* [outer canthus], or both sides which may progress towards *Krishna Mandal* [Cornea]. A *pterygium* is a benign, fleshy triangle of tissue that typically develops in the inner corner of the eye. A Pterygium will not usually cause serious health complications. However, it can sometimes cause discomfort and problems with vision. Prevention, conservative treatment or sometimes surgery is advised for treatment of *pterygium*.

Keywords: Arma, Shuklagata netraroga, Pterygium, Krishna Mandal

Introduction:

Eyes are the most important and beautiful among five sensory organs. It is very difficult to imagine the existence of humankind without eyesight. In *Ayurveda Samhita Grantha*[1]

“Arma” is described under ‘Shuklagata netraroga’. Arma is a *mamsal vrudhi* [fleshy growth] developing either from *Kaneenika sandhi* [inner canthus] or *Apanga Sandhi* [outer canthus], or both sides which may progress towards *Krishna Mandal* [Cornea]. If this layer occupies that part which is transparent in nature it causes disturbance in the vision Arma is derived from *ru dhatu* and *manin pratyaya* – Arman. *Shyati gacchati iti Arma* – that which grows gradually. [2]

Aims and Objects:

Aim and objects of this critical Review of this study is evaluation of the importance of the various types of *Ayurvedic* methods.

Material and Method:

Literature reviewed from Modern Allopath text and Ancient Ayurvedic classical text.

Arma [*Pterygium*]: Ayurvedic concept:

The common etiology of *Netra Rogas* can be considered as etiology of *Arma* where sweating, exposure to dust, smokes etc are the causes [*Swedadi dhum nisevana*] mentioned. It is also stated that dietary factors such as '*Shukta, Aarnala and Masadi sewana*' i.e. excessive intake of sour and meat related substance led to develop pathogenesis and the weak part of eye might get affected. In accordance to *Shusruta*, various diseases of eye are occurred due to either dominance of *Vata*, *Pitta* and *Kapha dosha* as well the site of occurrence of such conditions are seen on different parts of eye. Depending on those factors, eye diseases are categorized under easy or hard to treat. *Arma* [*Shukl Arma*] is developed due to vitiation of

Kapha entity and seen on *Shukla* [white part of eye], which is difficult to treat. [3]

Signs and symptoms : The signs i.e. local erosion and irritation and others *etiology* like *shukta arnala masadi sewana* cause vitiation of dosha which further move upward in the head and reach at weak functioning part of eye, where vitiation of *dosh-dushya* [*Vata-Pitta-Kapha –Rakta*] (pathogenesis) takes place and clinical manifestation emerges.

Five types of *Arma* have been described in the Ayurvedic Text are as follows [4]

- *Prastari Arma* – It is wide and thin structure having red colour mixed with blue, situated on the white part of eye ball. Tridosha and mansa are involved.
- *Shukla Arma* – It is a soft, white structure progressing slowly and evenly on the white part of eye ball.
- *Kshataj Arma* – It is a developing muscle on the white part of sclera resembling in colour of lotus flower. It has been called *Rakatja Arma* by *Vagbhata*.
- *Adhiamamsaja Arma* – It is wide, soft, thick structure on the white part of eye ball resembling to the colour of liver i.e. brown.

- *Snayu Arma* – It is progressing muscular growth in stripe shape, rough and pale in colour on white part of eye ball

Review on *Pterygium*: Modern Science Concept

Eye anatomy and physiology: Human being is totally dependent on normal functioning of eye for getting visual impact and necessary knowledge. Our eyes allow us to visualize the world around us. Eye consists of three layers: the outermost fibrous layer, the middle vascular layer, and the inner neural layer. The outer fibrous layer contains two main structures: the sclera and the cornea. The sclera is like a wall situated around the eye. The visible part of the sclera is covered by a transparent mucous membrane, the conjunctiva. Sclera approaches the anterior portion of the eye and reaches to transition point known as the corneal *limbus*, from that point it continuous to cornea. The cornea is a transparent, dome shaped clear layer that covers the iris and the pupil. It allows light to enter the eye, and its curved shape helps to focus light on the retina and to the lens and protects the eye against infection and structural damage to the deeper parts.

At the periphery of the cornea, there are stratified *squamous* epithelial cells which

continually divide and regenerate the cornea, and they help to heal after a corneal injury or abrasion. The cornea doesn't contain blood vessels and therefore immune cells can't access the cornea.

The middle layer of the eye is composed of the iris, the *ciliary* body and the choroid. The iris controls the size of the pupil, and thus the amount of light reaching the retina. *Ciliary* body controls the power and shape of the lens and is the site of aqueous production. The choroid is a vascular layer that provides oxygen and nutrients to the outer retinal layers. The inner layer of the eye is the retina, a complex, layered structure of neurons that capture and process light. The three transparent structures surrounded by the ocular layers are called the aqueous, the vitreous and the lens. The anatomy and function of the eye is extremely complex and pathological conditions are leading to develop wide range of ocular disease manifestations named as eye related problems.

Most of the people have eye problems at one time or another. Some are minor and subsides on their own; some of the disease conditions are easy to treat, however some conditions require special care and surgery too.

Pterygium is a one of the eye related problems, which is triangular or wedge shaped growth that develops on the conjunctiva of the eye and grows onto the cornea. The conjunctiva is the clear, thin membrane that covers the white of the eye. The cornea is the clear covering on the front of the eye. *Pterygia* are not harmful, but they can cause eye irritation and changes in vision.

The term “*pterygium*” originates from the Greek term “*pterygion*” meaning “small wing” like growth pattern. *Pterygium* is an abnormal growth of epithelial and *fibrovascular* tissue from the *corneo-scleral limbus* that invades the cornea. Thus it is causing ocular surface inflammation and potential vision impairment. *Pterygia* typically develop in the inner corner of the eye, next to the nose. They may grow in one or both eyes. In the early stages, a *pterygium* may not be very noticeable. It is also unlikely to cause any discomfort or changes in vision. [5]

Classifications of Pterygium: *Pterygium* was classified *histologically* and divided into three morphological types: Angiomatous, Fibrous and Mixed.

Angiomatous pterygium: stroma contains a significant number of vascular vessels with edema in inter vascular space.

Fibrous pterygium: stroma is predominantly fibrous with a few scattered vascular elements

Mixed pterygium : stroma contains both vascular vessels and thin bundles of *collagenous* tissue

Another classification has taken into account the degree of progression of *pterygium* on the cornea and have divided pterygium into 5 stages (Table 1) [15]

Clinical Stages of Pinguecula and Pterigium.

- Stage 0 : *Pingeoculum*, posterior to the *limbus*
- Stage 1 : Tissue involvement to the *limbus*
- Stage 2 : Tissue just to the *limbus*
- Stage 3 : Tissue between the *limbus* and *pupillary* margin
- Stage 4 : Tissue central to the *pupillary* margin

Observation and Conclusion:

A pterygium is a benign, fleshy triangle of tissue that typically develops in the inner corner of the eye. A pterygium will not usually cause serious health complications. However, it can sometimes cause discomfort and problems with vision. Prevention, conservative treatment or sometimes surgery is advised for treatment of pterygium.

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