



A REVIEW ARTICLE ON ARMA AND ITS MANAGEMENT IN ATYURVEDA

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ABSTRACT

Arma is one of the Suklagata Netra Rogas, characterized by triangular growth of Dushita mamsa dhatu i.e., growth of fibrovascular tissue sub-conjunctivally and spread on to the cornea It is one of the Chedana Sadhya Vyadhi. It can be correlated with Pterygium in contemporary science. It is one of the most common eye problems requiring prompt attention. It has a major incidence worldwide and is very common in both developed and developing countries. It is affecting all age groups and both sexes. It is the common cause of ocular morbidity.

KEY WORD: Arma, Shukla Mandal, Krishna Mandal.

INTRODUCTION

Netra is one of the most important gyanendriyas explained in classics. The most significant and attractive of the five sense organs are the eyes. Acharya Sushruta and Vagbhata has discussed Arma is a Mamsal vrudhhi originating from Shukla mandal. It is can eventually reach the Krishna Mandal. In initial stage of Arma where the growth is thin and confined to a small area limited to Shukla Mandala, use of Lekhana Anjana is indicated.

ARMA

Sushruta describes eleven different forms of diseases of Shukla mandala which are peculiar to the sclerotic coat of the eye such as Prastaryarma, Shuklarma, Kshatjarma, Adhimamsarma, Snaywarma, Sirajal, Sirapidika, Balasagrathita, Shuktika, Arjuna, and Pistaka¹³

Acharya Vagbhata supplements Sirotpata and Sirapraharsha also to the Suklagatha group.

Thus, Vagbhata describes thirteen Rogas in Suklamandala. Among these the first five can be grouped in to a main heading called "Arma" due to it similarity in features¹⁴.

Nirukti

The term "Arma" derived from the dhatu "Ru" which means "Gati Prapanayo" that is a layer gradually growing forward.

Another description about Arma is that 'Ruchyati Vinasham Prapayati Ityarthe Armam" that means a substance which can ruin or destroy the transparency of the cornea or Krishna Mandala

This is a disease in which a wing like layer which gradually develop from the Kaneenaka Sandhi (Inner canthus) or Apangasandhi (outer canthus) towards the Krishnamandala.

If this layer progress to the Krishnamandala which is transparent will damage, there by disturbance in Vision May leads to. The Nirukthi of the word Arma is merely similar to the description of Arma. Hence both these are one and same.

NIDANA

- Nidana are the factors which causes initiation and progress of the disease. The exact goal of the treatment is archived by avoiding the causative factor of the diseases is very important. A person though takes complete treatment without avoiding the Nidanans it's merely unless.
- Various etiological factors can be studied under differently as listed in the following table



**Table No. 1 Showing Netra roga Samanya Nidana
A. Ahara Sambandhi Nidana**

SL.NO	NIDANA	SU ²³	MN ²⁴	BP ²⁵	YR ²⁶	VS ²⁷	GN ²⁸	C.M ²
1	Vidahi	+						+
2	Amla	+						+
3	Kshara	+						+
4	Teekshna	+						+
5	Ushna	+						+
6	Atisheeta	+						+
7	Guru	+						+
8	AtiAmbu/ Dravapan	+		+	+		+	+
9	Atimadhy Apana	+	+		+		+	
10	Virudha anna	+						
11	Asatmya							
12	Atividagdha							+
13	Shukta	+		+				+
14	Aaranala	+		+				+
15	Kulatha	+		+				+
16	Masha	+		+				+

Table No. 2 Showing Netra roga Vihara Sambandhi Nidana

1	Avakshira							+
2	Ucchita Shirashayina							+
3	Ushnabhithaot hasyajala praveshath	+	+	+	+	+	+	+
4	Doorekshanath	+	+	+	+	+	+	+
5	Sookshmanireksana	+	+	+	+	+	+	+
6	Pratatekshana							+
7	Swapnaviparyaya	+	+	+	+	+	+	+
8	Prasaktha samrodhana	+	+	+	+	+	+	
9	Kopa/Shoka/Klesha	+	+	+	+	+	+	+
10	Abhithatha	+		+		+	+	
11	Athimaithuna	+	+	+	+	+	+	+

Description

Ahitannapana

Excess intake of Amla, Kshara, Teekshna, Ushna dravyas are Achakshushya. Apathya intake of Shukta, Aranala, Vidahi, Asatmya Ahara, Atimatra, Virrudha, Atisheeta, Guru Dravya, Kulatha Masha, Pinyaka, Virudaka etc. are Achakshushya, because they cause Agnimandya which have direct impact on the Pachaka Pitta as it is the remote of all the Pitta and it is governed by Agni³¹. So Agnimandhya will hamper the functions of Alochaka pitta. Hence in the *samprapti Prayah Piitanusarina* is told to show the importance of Pittain the manifestation of eye diseases.

Ahita Vihara

Improper functions of Kaya, Vak and Manas are considered as Ahitavihara. It includes Doorekshanat, Sookshma Nireekshana, Ratrijagarana etc causes vata prakopa leads to Vataja Netra Roga (causes improper blinking of eyes, reduced tear flow leading to dry conjunctiva. Thus, conjunctival defence mechanism is altered leading to infections)

Especially Bashpa nigraha has major role in producing eye disease. Tear has bacteriostatic activity. Tear flow also cleans the eye, discards the accumulations and protects eye from

pathogens. Withholding the tear during emotional outbreaks will affect the normal functioning of lacrimal apparatus. Inadequate tear secretion leads to dry conjunctiva, by which pathogens can easily affect the eye.

Hence Ahita Ahara and Vihara act as Viprakrista nidana for producing eye diseases.

Agantuja nidana

Agantuja nidana are the exogenic factors leading to origination of Arma. These include expose to raja, Dhooma, Atapa etc.

Air pollution and water pollution

Polluted air by Smoke, dust etc and water which is with abundant in infective organisms are highly irritant to the eyes and make them prone to many infections in eye. These act as both Sannikrista and Viprakrista Nidana for Netra roga.

Aupasargika or Sankramika nidana:

Acharya Sushrutha has cautioned Abhishyanda, can be manifested as a result of contagious aetiology and disease spread from one person to other person through air close contacts, exposure, fomites such as clothes, cosmetics etc. Chronic Abhishyanda causes the cause for the production of Arma hence



It acts as either Pradhanika Nidana or as Sannikrista Nidana for Arma.

Direct action of Krimi on Netra

Acharya Vagbhata explained that Krimi is the source for causing the eye diseases directly.

Kha-vaigunya karaka nidanas

Acharya Sushruta explained that the vitiated Doshas during Sthanasamshraya Avasta settles at the site of Kha-Vaigunya and produces Vyadhi.³² Kha-vaigunya in Netra may occur due to many factors which cause vitiation of doshas. Kha-vaigunya in Netra occur directly due to Agantu Karanas like Raja, Dhooma, Dooshitavata Sevana etc. Ahitakara Ahara will cause formation of Guna Heena Dhatus which make eyes prone for diseases. Kha-vaigunya may be compared to stagnation of Rasa Paribhramana due to the reduction in defence mechanism of conjunctiva leading to conjunctival disorders. Thus Kha-vaigunyakaraka Nidanas have vital role in the origination of Arma

The pathogenesis of all eye diseases is attributed mainly to vitiated Pitta Supplemented by Vayu and Kapha. The general causative factor for the vitiation of Pittadosha are same in the case of eye diseases and the other bodily diseases.

No specific Nidanas, Poorva Roopa, Samprapti are mentioned anywhere regarding arma in the classic text books. We can find out some major etiological factors and premonitory symptoms other than the common nidanas mentioned earlier from our day-to-day experiences. The incidence of Arma is predominant in persons who reside at industrial, area, dusty area, polluted area and also people who perform more near work as a profession, like careful watching such as handicraft, micromachinery work, manipulation of minute objects causes eye strain, worm air, vigorous type of irritating fumes, fine practical of other materials, smoke, dust exposure to sunlight, heat, ultra violet rays etc. also effect the eye.

Another important factor relation to its Nidana is that the disease is often seen along with malnutrition. In whom the resistant power to external injury, infections etc. are comparatively less in these patients.

In addition to the above abnormal seasonal variations, inhalation of poisons fumes, Allergic manifestation Amalpitt Ajeerna etc. causes the Dosha Vaishyamy which ultimately deranges the equilibrium of Dosha, Dhatu and Mala and causes diseases like Arma.

SAMPRAPTI

From the onset of Dosha Dushya Dushti till the advancement of the Vyadhi there happens different Vikriti. Samprapti clarifies such arrangement of obsessive stages included. It tells us almost the overall pathogenesis of a disease.

Samprapti of Arma can be understood by the following two headings,

1. Samanya Samprapti of Arma (Netra roga)
2. Vishista Samprapti of Arma.

Samanya Samprapti of Arma (Netra roga)

The Samanya Samprapti of Netra roga that is explained in classics can be considered as the Samanya Samprapti of Arma. As per Susruta, the vitiated Doshas, spreads to Jatru Urdhva Bhaga through the Siras and localized in the Netra and causes the eye diseases³³.

Acharya Vagbhata in Astanga Hridaya³⁴ and Ashtanga Sangraha³⁵ has explained specific nidanas for Netra rogas, in sarva roga adhyaya of Nidana sthana as vitiated doshas spread to Urdhva Jatru bhaga through Pittavaha Siras and localized in Netra and manifests akshi roga.

Madavakara³⁶, Yogaratnakara³⁷, and Gadanigraha³⁸ followed the Susruta's method

Vishista Samprapti of Arma

No author describes the pathogenesis of Arma in specific. Thus, the common pathogenesis of the common eye illnesses as it were diseases only considered here.

According to the Ayurvedic hypothesis of pathology the sign of any illness takes after a specific design of chain. follows a particular pattern of chain. The first stage of this chain is 'Sanchya' the stage of accumulation of Dosha where there is derangement within the homeostasis of the tridosha. Typically taken after by 'Prakopa' the stage of provocation of Dosha. During this phase any vitiated dosha travels from its sthana to the vicinities of other Doshas. Prakopa is followed by prasarana the stage of propagation in which the vitiated doshas circulate all over the body and in the next phase that is Sthanasamshraya the stage of manifestation the doshas get settled in particular organs or sites. Here they cause morbid changes and thus manifest as disease. This description is for nija rogas where a prior vitiation of doshas to the manifestation of the disease occurs. If the disease is not handled properly becomes complicated it is known as stage of Bheda.

In the case of Arma, based on its etiological factors, the vitiated doshas dominantly pitta and rakta reaches the eyeball through the Sira supplying the eye.

The doshas thus reached the eyeball, get vitiated again along with Vata. This provokes the doshas to move from its original seat.

The provoked vata, pitta and rakta due to intensity of vitiation, goes to various parts of the eye and vitiates kapha situated in the eyes and its surrounding structures. At this stage, redness and slight pain are seen as premonitory symptoms.

For every disease, the particular location is important for the manifestation of symptoms. In this disease, the vitiated doshas and dushyas locates on sandhies of netras mainly on kaninaka and apanga. After that a slowly growing thin layer of kaninaka or apanga sandhican be seen. In some cases, it is seen that the layer is growing from both the sandhies. Sometimes it is manifested only in one eye. The incident of both eyes is also not uncommon.



This layer gradually grows covers the Shukla Mandala, the Krishna Mandala, finally enters the Drushti Mandala. when Shukla Mandala begins, patients complain Irritation, lacrimation, redness is complained by the patient at the onset of Arma in Shukla Mandala. This layer gradually destroys the outer layer and transparent of the eye- conjunctiva-and its transparencies. When this layer extends into the papillary region, it will cause serious impairment of vision by preventing entrance of the light rays in the eyeball.

The dosha predominance of each case can be determined only due to its difference in colour and symptoms. White colour denotes the predominance of kapha, while red colour denotes for rakta and pitta. Bluish red is usually seen in predominance of all doshas.

The nature of flesh and thickness of the layer helps to distinguish one type of arma from others.

- Progressive Arma is Prastari Arma.
- Thin white slowly progressive is Shleshma.
- Red coloured Arma is Kshataja.
- Thick Arma with more flesh is Adhimamsarma.
- Yellow Arma like Snayu is Snanyuarma

Both Sushruta and Vagbhata described five varieties of Arma and a lot of resemblance is seen in all aspects such as names, etiology and description except in the name of Shonitarma. Sushruta named this disease as Kshatajarma or Lohitarma.

SAMPRAPTI GHATAKA

Dosha	:	Tridosha
Dushya	:	Rasa, Rakta and Mansa
Adhistana	:	Kaninika ,Apang
Vyakta sthana	:	Shukla mandala
Rogamarga	:	Madyama

POORVA ROOPA³⁹

Poorva Roopa denotes the symptoms that manifest in completely. No reference is available regarding the Poorva Roopa of Arma in any texts but the samanya Poorva roopa mentioned for Netra roga can be considered here.

Samanya Poorva Roopa of Netra Roga

- Avilatha (dirty eyes)
- Samrambha (mild oedema)
- Ashru(lacrimation)
- Kandu(itching)
- Upadeha(stickiness)
- Gurutha(heaviness)
- Osha (burning sensation)
- Toda (pricking pain)
- Raga(redness)
- Shoola in varthma kosha(Pain)
- Shooka poornata (foreign body sensation)
- Vihanyamana roopa visual disturbance

ROOPA

- The symptom of a disease or its characteristic manifestations those appear during the course of a disease is known as Roopa.

Prastharyarma⁴⁰

Prastharyarma is a thin and progressive growth. It is seen in reddish blue colour in the whole of the Shuklamandala i.e., in the sclerotic coat underneath the conjunctiva.

According to Vagbhata the pathological lesion happened due to the vitiation of all the doshas in combination with raktha. The onset and development of this disease is rapid, pain is not mentioned anywhere by any authors. He says that the colour of the membrane is shyavalohitha. This resembles to Sushruta's description of "Rudhira Prabha Neelam". But Videha describes that the colour is either shyava or rakta. He also says that this is due to Sannipatha dosha vishesha.

Shuklarma⁴¹

The name itself denotes the colour of the membrane as white. It is due to the vitiation of Kapha. A crop of soft and whitish growths slowly extending over the entire length of the Shukla mandala is called Shuklarma.

Shonitharma or Lohitharma⁴²

It is otherwise called kshthajarma. The additional growth of the membrane from both sandhees or can thus over the Shukla Mandala is seen in reddish colour like petals of the lotus flower. This is a soft fleshy growth.

Adhimamsarma⁴³

This is a soft thick and dark brown membrane resemble to the colour of the liver, on the Sukla Mandala is called Adhimamsarma. This may be extended to most of the Sclerotic area. The colour may vary from Syava to dark brown.

Snayvarma⁴⁴

An additional growth on Shuklamandala with rich in blood vessels and nerves resembles Snayu manifested in the Shukla Mandala, is known as Snayvarma. Here the name denotes the signs and symptoms of the particular disease. Sushruta describes it as a rough growth of flesh in Pandura Varna on the white coat. It is called Snayvarma.

UPASHAYA AND ANUPASHAYA

A judicious application of Oushadhi, Ahara and Vihara, when produces relief in the symptoms is called as Upashaya and when aggravates the symptoms is called as Anupashaya. In classics such references related to Upashayanupashaya of Arma are not found.

There is no reference available in the classics about the Upashaya and Anupashaya of Arma.

SADHAYASADHYATA

Sadhyasadhyata gives the clear picture of the prognosis of the disease. It depends upon many factors like, nature, severity of disease, vya, prakruti, bala of patient etc. Arma is a Chedan Sadhya Vyadhi⁴⁵ It is explained as curable disease by the excision therapy

UPADRAVA OF ARMA

In the classics, there is no reference available regarding the upadrava of Arma but when encroaches the Krishna Mandala



then it causes disturbance in visual pathway and cause visual disturbances.

VYAVACHEDAKA NIDANA

Table no.3 Showing the Vyavachedaka Nidana of Arma

No	A.H ⁴⁶	Sushruta ⁴⁷	Colour	Doshakopa	Other Symptoms
1	Prasthary Arma	Prasthary Arma	Shyava Lohitham (Bluish red)	Vatha, Rakta Kapha,Pitta	Thin growth Progressive spread of of Arma
2	Shuklarma	Shuklarma	Shukla Varna (White)	Kapha	Soft and whitesh growth slowly extending over the entire length of the the Shuka Mandala
3	Shonitarma	Kshatajarma (Lohitarma)	Raktha varnam (Red)	Raktha	Soft fleshy growth reddish colour like petals of the lotus flower.
4	Adhi Mamsarma	Adhi Mamsarma	Shyava varnam	Kapha and Vata	Soft, thick and dark brown membrane develops
5	Snayu varma	Snyvarma	Pandura varnam	Kapha	Rough growth with rich in blood vessels and nerves and rough growth of the membrane.

CHIKITSA VIVECHANA

The first and foremost method of treatment of Arma is Chedan, procedure of surgery described by Sushruta and Vagbhata. They explain all the pre and post operative aspects also. According to modern medicine surgery is only the treatment of the choice, but in Ayurveda prescribes certain Anjanas can be prescribed in the earlier stage to reduce the thickness and progression of Arma. Hence Ayurvedic therapy have the preventive and curative medical and surgical therapies.

Anjanas mainly have Lekhana properties which can gradually taper the thickness of the membrane and thereby prevent the growth and also reduces the size. The important Anjanas mentioned in our texts are Lekhana Anjanas such as Triphaladi mashi, Marichandi Churnanjana, Samudra Phenavarthi, Chandrodaya varthi, etc. In addition to these Anjanas other therapies such as Sneha, Sweda, Nasya, Raktha mokshana, internal medications etc. are also used for the treatment of Arma by the Ayurvedic practitioners. If the nature of Arma is thin, fume like not well formed, curd white, blood red colored should be treated with medicines as like Shukla Roga.

An Arma which is very thick and looks like a piece of skin and covered over with fibers of flesh and nerves as well as one occurring on the cornea or Krishna mandala should be indicated for surgery till that time it can be managed by topical and oral therapy.

Patients suitable for surgery should be given appropriate Sneha and Sweda after considering the predominant dosha. When Samyak snigdhattha attained, eyes should be given mild fomentation. The patient should advise to be in supine position on the surgical table.

Before the Pradhan Shastra Chikitsa the Arma should be disintegrated (shaiithiya) by the application of Lavana + Bijapooraka Swarasa and massaged with the thumb for a while

Due to this massage the growth of the pterygium is separated from the base, care should be taken to avoid all types of movements of the head during surgery. In detail instructions should be given to concentrate to the opposite side of the growth to expose the lesion properly. That means if pterygium extend from the medial can thus the patient should look towards the lateral canthus. Likewise, if the growth of the pterygium is from the lateral canthus the patient should concentrate their eyes to the medial side. The fold of the membrane should be separated from base by either Badisha, Muchudi or by Soochi shasthra. Then this membrane should be separated completely from the shuklamandala by the instrument Mandalagra. Afterwards this 3/4 of the membrane should be cut. Before the surgery care should be taken to avoid any damage to Kaneenaka Apanga Sandhi Lacrimal ducts its Srotas and also the various vital veins, arteries and nerves concerned.

If any damage happens to kaneenaka and apanga or to lacrimal apparatus, Ndeevrana may develop associated with severe complications.

After a successful surgery to scrape the residual 1/4 Arma a paste which is prepared out of Vyosha, Saindhava and Madhu should be applied at the operated part for Prathisarana karma. Then Seka should be done with ghee which is gently warmed. Finally, a part of ghee and honey should be applied to the eyes and bandaged.

The bandage should be changed on 3rd, 5th 7th days. On these days seka must be done with appropriate medicines. After seven days the bandage is not necessary but for Seka can be prepared with karanja beeja. This can be prepared in milk also. There are so many other kwatha. Also prescribed for Seka according to



the predominance of Dosha. In all the cases honey should be mixed with kwatha before conducting the seka. These are the main post operative measures.

If patient feels comfort and there is no incidence of pain the surgery is considered as successful an uncomplicated one. If any complications due to excessive or less cutting of the membrane may be managed with Sekas and Anjanas which has the quality of Lekhana and Brimhana

For the prevention of further development of membrane operated the patient's surgery should take Anjanas for at least one year.

Aushadhi Yogas Explained in classics

- Shankhadi Anjana⁴⁸
- Shilanjana⁴⁹
- Shuklari varti⁵⁰
- Sitadi Anjana⁵¹
- Dakshndadi Anjana⁵²

- Nayansukhavarti⁵³
- Prabhavati gutika⁵⁴
- Gutikanjana⁵⁵
- Guduchydi Anjana⁵⁶
- Chandanadi Chooranjanana⁵⁷
- Tamradruti Anjanam⁵⁸
- Tuthadi Varti⁵⁹
- Marichyadi lepa⁶⁰
- Manjisthadi Anjana⁶¹

PATHYA AND APATHYA

Various dietary regimens, conducts, medicaments and the treatment modalities which are Pathya (helpful) and Apathya (hazardous) for the patient suffering with Netraroga are listed in the table No.5 Same Pathyapathya is recommended in Arma in which the drugs should possess tikta rasa, laghu and kapha Pittahara property

Table No. 4 Showing Pathya in Netraroga / Arma

Aharaja		Viharaja	
1.	Shastika shali	1.	Atapatra dharana
2.	Purana shali	2.	Padatrana dharana
3.	Yava	3.	Manahashati
4.	Godhooma	4.	Gurupooja
5.	Mudga	Aushadhi Varga	
6.	Jangala mamsa	1.	Purana gritha
7.	Patola	2.	Triphala ghrita
8.	Karavella	3.	Patola
9.	Kadali	4.	Shigru
10.	Soorana	5.	Draksha
11.	Divyambu	6.	Lodra
12.	Lava mamsa	7.	Karavellaka
13.	Mayura mamsa	8.	Triphala
14.	Vanakukkuta Mamsa	9.	Punarnava
15.	Koorma mamsa	10.	Kakamachi
16.	Sthanya	11.	Kumari

Upacharaja		Aushadhi Varga	
1.	Langhana	12.	Sita
2.	Ghrita pana	13.	Vartaka
3.	Swedana	14.	Dattura
4.	Upanaha	15.	Kulattha yoosha
5.	Virechana	16.	Dadhima
6.	Nasya	17.	Chandana
7.	Dhumapana	18.	Saindhava
8.	Rakthamokshana	19.	Karpura
9.	Lepa	20.	Bhringaraja
10.	Seka	21.	Patola
11.	Aschyotana	22.	Jeevanthi
12.	Anjana	23.	Matsyaakshi
13.	Pratisarana	24.	Nava moolaka
14.	Ksheera dhara	25.	Shatavari
15.	Jala Gandhoosha	26.	Madhu
16.	Pada Abhyanga	27.	Mridhveeka
17.	Avagundana	28.	Saindhava lavana
18.	Prapoorana	29.	Chavya



19.	Pindi	30.	Karkotaka
20.	Tarpana	31.	Meghanada
21.	Putapaka	32.	Peya
22.	Vidalaka	33.	Vilepi
23.	Avachornana	34.	Lashuna
24.	Udvarthana	35.	Kulaththa Peya

Apathya

Dietary regimens, conducts, medicaments and the treatment modalities which are hazardous for the patient suffering with netraroga are termed as apathya. These will have Amla, Lavana, Katu Rasa, Teekshna, Ushna, Guru, Vidahi, Vistambhakara guna.

Specific apathya explained in chikitsa manjari for Arma roga is Dadhi, kadali phala, Pridhuka, Pappad, Narikela, Panasa beeja⁶⁴

Table No.5 Showing Apathya in netraroga / Arma.

Aharaja		Viharaja			
1	Dadhi	1	Vegadharana	16	Maithuna
2	Madhookapushpa	2	Adhyashana	17	Sookshmekshana
3	Pinyaka	3	Krodha	18	Danta vigharshana
4	Viroodha	4	Shoka	19	Nisha Bhojana
5	Kalinga	5	Rodana	20	Prajalpana
6	Matsya	6	Divaswapna	21	Chardana
7	Sura	7	Ratrijagarana	22	Rajo sevana
8	Panasa	8	Atapasevana	23	Drik swedana
9	Viruddha anna	9	Ambupana	24	Jala avagaha
10	Valooraa	10	Teekshna darshana	25	Bhasvala darshana
11	Ajangala mamsa	11	Sahasa	26	Tamboola sevana
12	Dadhi	12	Snana	27	Grahana darshana
13	Kantakari	13	Dhooma sevana	28	Chalavastudarshan
14	Phanita	14	Diva swapna	29	Madhyahna arkadarshana
15	Sarshapa taila	15	Rodana	30	Nisha jagarana

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