



ANJANA: A REVIEW ARTICLE

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ABSTRACT :

Kriyakalpa is the basis of the ophthalmic disorders, as *Panchakarma* is the basis of *Kayachikitsa*. When we refer to our classics for the therapeutic measures adopted in the management of eye diseases, we find that the management includes many of the topical treatments along with systemic ones. The reason might be that the drugs administered systematically may not cross the blood aqueous, blood-vitreous and blood-retinal barriers. Now the topical measures came into play and these are called as '*Kriya Kalpa*'.

No specific definition of *Kriyakalpa* has been given by the ancient scholars except the commentator Dalhana who opines that *Kriyakalpa* includes various preparations like *Tarpana*, *Putapaka*, *Seka*, *Ashchyotana*, *Anjana* etc. for the treatment of eye diseases, as a local measure. The process in which herbo mineral preparation (*Gutika*, *Rasakriya* & *Churna*) mix with water and apply on the eyelids with the help of *Shalaka* is called *Anjana Karma*. An Ayurvedic review & probable mode of action of *Anjana Karma* discussed in present article.

Key words: *Kriyakalpa*, Ocular pharmacology, Drug administration (*Anjana*), Eyes.

INTRODUCTION: *Netrakriyakalpas* are various methods of application of medicines in the eye. *Acharya Susruta* explains 5 varieties, but we get 7 types of netra kriyakalpas in *Sharangdhara Samhita* which include *Tarpanam*, *Putapakam Sekam*, *Aschyotana*, *Anjana*, *Pindi* and *Vidalaka*. In *Sushruta samhita* there is no indication of *Pindi* and *Vidalaka*.^[1] These methods can be invariably use in all types of *doshik* vitiation, it is the drugs used for the procedure that make it more specific to particular *dosha* .e.g. *seka* can be performed *vata* predominant eye disease but it should be *snigdha* and *koshna* in nature, in

pitta rakta predominant condition it should be *sheeta*, *tikta* , *kashaya* dravyas are preferable and in *kaphavikar* it should be made of *Katu*, *tikta*, *kashaya* dravyas. *Seka*, *Ashchyotana*, *Vidalaka* and *Pindi* can be advised in the *Amavastha* or early stage of a diseases process *Tarpana*, *Putapaka* and *Anjana* are preferred in the *Pakvavastha* (later stage).

Among this because of easy administration, availability, affordable price *Anjana* is the best option among *Kriyakalpa* especially when a long term therapy is needed. *Anjana* (collyrium) is a popular method of application of medicine inside the eye. In addition to its benefits in curing ailments

related to the eye this particular procedure is mentioned as a daily routine in order to protect the eye from various eye disorders and to maintain the equilibrium of *doshas* inside the eye. Though there are indications of *Anjana* everywhere in different contexts of *Netrarogas*, Acharya explore vast varieties of *Anjana* for the management of *Drishtigatarogas*.^[2] It may be due to the fact that compared to other methods it can be advised for long period and *Drishtigataroga* needs prolonged therapy either in terms of care, prevention or for treatment.

WHEN TO ADVISE ANJANA: The appropriate time for application of *Anjana*, according to Acharya is after the administration of *shodhana* therapy and when the *doshas* localise only in the eye and the *Amavastha* is totally eliminated from the eye and the eye starts to exhibit *pakwa lakshana* like reduced oedema, severe itching, lack of discharge etc.^[3]

Implementing these methods of treatments without losing their priority in different *doshik* status deserve great attention, because the patient is benefited only if we indicate the particular method in correct time of application otherwise instead of pacifying the *doshas* in the eye, it may deteriorate the condition and results in complications. Acharya Vagbhatta mention to *Ashchyotana* as a '*Pratham Kriyakalpa*' means there is no need of *Samshodhana Karma* before using it. So naturally it may be doubted whether "it is necessary to perform *Ashchyotana* in all cases?" Acharya himself give answer in different contexts, look the treatment of *Sushkakshipaka* here *Tarpana* is indicated after *snehapana*, as it is a *vata pitta* predominant condition *Ghrita* is the best option of treatment so administration of ghee

internally and locally in the form of *snehapana* and *Tarpana* is highly appreciable in the treatment protocol for *Sushkakshipaka*.^[4] So we are having the freedom to select the different treatment procedures of the eye according to the need. Just like the above example in *drishtigata roga* if the condition of the eye is devoid of *Amavastha* surely it is possible to precede the treatment with *Anjana* therapy. For e.g. in senile, nuclear cataract there is no chance of lens swelling as it results due to sclerosis, so it is possible to start *Anjana* as initial therapy on the other hand if there is swelling of the lens surely we have to wait these symptoms to subside before the application of *Anjana*, likewise it is possible to assess the *Amavastha* of *Drishtigata roga* through the symptoms as these diseases lack redness, discharge, oedema from their gross appearance.

CHOICE OF ANJANA IN DRISHTIGATA ROGA: The *Anjana* are of three types, as we have to treat diseases developed by three different humours. 1) **Lekhana Anjanas** mentioned for Kapha predominant conditions 2) **Ropana Anjanas** for pitta related diseases 3) **Prasadana Anjanas** for vataja vikaras. The *Lekhana Anjanas* are made of *dravya* having *kashaya*, *amla*, *lavana* and *Katu* in *rasa*, *Ropana Anjana* are with *tikta* *dravya* and *Prasadan Anjanas* with *madhura sheeta dravyas*.^[5]

These three varieties are of much significance while treatment of *Drishtigata roga*. In the management of cataract it is having predominance to *kapha*, *lekhana Anjanas* are of great importance. We may come across the whole varieties like *ChoornAnjana*-the powder form, *PindAnjana (Gutika)*- the solid form and *Rasakriya* which is in the semisolid form

(*Rasakriya*) in this particular context.

ANJANA MATRA (DOSE OF ANJANA): Depending on the quality of drugs the *Anjanas* are divided in to two. 1. *Tikshna* 2. *Mridu*. So the above mentioned *Anjanas* can be again categorise in to two groups, the dose of *Anjana* depends these two qualities.^[6]

The dose of *Gutika Anjana* of *tikshna* variety is Harenu matra and of *mridu* variety is double the dose of it. The dose of *Rasakriya* is *vella matra* for *tikshna* variety and in *mridu* variety it's twice the dose of above and the amount of *Choorna Anjana* to be applied in the eye is around two *Shalaka* in *tikshna* variety and three in the other.

Though Acharyas advise the above mentioned dosage for application of *Anjana*, practically the individual response of eye and patient may vary which depends on various factors like the tolerance capacity of the patient, the Prakriti of patient, type of *Anjana* used, the amount applied etc, so it is better to apply least quantity of *Anjana* when it is applied for the first time, especially *tikshna Anjana* and gradually the amount can be increased to a maximum for e.g. of *Gutika Anjana*.

WHEN TO APPLY ANJANA: There is different opinion regarding the timing of *Anjana*. During night due to sleep and in the day time because of the hot rays of sun the eye becomes weak, so it is advised to do *Anjana* both morning and evening. While applying in the morning time it should be *kapha shamana* in nature as there is chance of vitiation of the same in the morning while in the evening it is better if it is *pitta shamana* as it may make the eye fresh and cool which became weak due to the exposure to hot sun-in this way the application of *Anjana* in morning and

evening surely correct the daily vitiation of *doshas* in a healthy eye. It is not applicable in pathological eye.

The other opinion is regarding the application of *tikshna Anjana*, as it contains *Katu, lavana, amla dravyas* which of boutique combination of *agni vayu* applying it in day time will again harm the eye as there is hot outside, but during night the coolness of the moon helps the eye to recover easily from the ill effects of *tikshna Anjana*. But according to some, application of *Anjana* in night should strictly avoid to them the *sheeta* in night it will cause *stambhana* so the drug can't act properly. Acharya Sushruta advises to do *Anjana* in morning for *kapha* predominant eye diseases, during evening for *vata* related eye diseases and in *rakta pitta* diseases it is advised to do in night.

METHOD OF APPLICATION: After deciding the type and dose of *Anjana* the desired amount of it can be applied in the eye using the different *shalakas* mentioned for particular purpose i.e. If *Lekhana* is the aim of treatment the *shalaka* made of *Tamra* (copper) is the best option and for *Ropana karma* a *kalalohaja* (iron) *shalaka* is better and if *prasadana* is the ultimate aim of treatment one can prefer a *shalaka* made of *roopya* (silver) *suvarna* (gold) and *anguli* (finger) is also mentioned for the application of *Anjana* in the eye.

After applying the *Anjana* patient is asked to move the eye ball after gently closing the eye, the patient is asked to move the eye so that *Anjana* may spread all over the surface of the eye, opening and closing of the eye spontaneously, rubbing of the lid forcefully and washing of eye should be avoided just after the application of *Anjana karma*. When the eye becomes free from the gritty feeling developed after

the application of *Anjana* netra *prakshalana* (Eye wash) should be the performed with suitable decoction. While preparing the decoction the factors like disease, *dosha* and season should be considered. After washing the eye, it should be cleaned with a piece of clean cloth. In conditions like severe vitiation of *kapha dhoomapana* can be advised after *Anjana*.^[7] *TikshnAnjanas* are contraindicated for prolonged use, and *pratyAnjanas* are advised for correcting the complications if developed during application of *tikshnAnjanas*.^[8]

MODE OF ACTION: According to Acharyas the *LekhanAnjana* because of its *tikshna* property, eliminate the *doshas* from the *siras* pertained to *vartma* & eye and from the tissue, from related *srotas* and also from the *sringataka marma* through mouth, nose and eye.^[9]

We get this much reference regarding the action of drug .Because of the complexity of the combinations applied during this procedure researches regarding the mode of action of ayurvedic drug still remains as a challenge .Any way there is no doubt that the drug administered in the eye surely penetrate the different medias and reach the proposed site, this is the inference that we get from the clinical trial. We need more research in this field especially to understand the differentiation of the drug towards different site, its absorption, mode of action so that it will be accepted by the scientific world.

DISCUSSION: Most of the *Anjana* contain Arsenic and Antimony compounds. The molecular size of these compounds are very high. They can't cross blood aqueous barrier when they are administered orally/systemically. *Anjana* form increases the bio availability of drug by increasing

the tissue contact time. So, the problem can be overcome when we apply it topically in the form of *Anjana*. Having the knowledge of these barriers our ancients advised to use such heavy drugs in the form of *Anjana*.

CONCLUSION: As in *Ayurveda*, we are applying ophthalmic therapeutic either in the form of local therapy i.e. *Kriyakalpa* or in the form of systemic use i.e. oral *Chakshushya dravyas*. The main aim of any pharmacotherapeutics is the attainment of an effective concentration at the site of action for a sufficient period of time to elicit the response. In practice, therapeutic effect is found in all types of *kriyakalpa*. It is up to the science to correlate the observations with their scientific explanation. Here in present review article, it is tried to correlate the *Ayurvedic* ocular therapeutic i.e. *kriyakalpa (Anjana)* on the basis of modern basic principles of Ocular pharmacology. Various drugs can be selected according to the stage and types of the disease and can be used in various *Kriyakalpa* procedures according to need. In the light of above fundamentals of modern pharmacology, all the *Ayurvedic* ocular therapeutic procedures are relevant as such. . Today current methods of drug delivery exhibit specific problems that scientists are attempting to address. For example, many drugs' potencies and therapeutic effects are limited or otherwise reduced because of the partial degradation that occurs before they reach a desired target in the body. If orally administered time-release medications deliver treatment continuously, rather than providing relief of symptoms and protection from adverse events solely when necessary. Present conventional system of medicine has topical and systemic administration of drugs to

the eye which are highly inefficient and there is a need for controlled, sustained release, particularly for conditions that affect the posterior segment. Various non implantable and implantable drug delivery devices have been developed which are far from satisfactory and result in more adverse effects which is driving scientists to research more and more into safe, effective drug delivery methods for all parts of the eyes.

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