M.S. Veena /J. Pharm. Sci. & Res. Vol. 12(12), 2020, 1546-1548

ISSN:0975-1459
Journal of Pharmaceutical Sciences and Research
www.jpsr.pharmainfo.in

A Conceptual Study on The Balya Effect of Vatada *(Punus amygdalus)*

Dr M.S Veena
HOD and professor, Dept of Dravya Guna , Govt Ayurveda Medical College, Bengaluru

Abstract
According to Sushrutha samhitha sutrasthana the word bala refer to oja. The word Bala also denotes the normal Kapha dosa as it has the function of providing bala for the body.He also adds the function of bala as nourishment and stability of mamsa dhatu.
Now a day because of mechanical life, with an advancement of science &technology, people are becoming more prone to stress & strain which reduces bala. And make susceptible to many immunosuppressive diseases. The drugs used in conventional system of medicine to increase bala have many adverse reactions. Ayurvedic pharmacopeia has many such drugs like ashwagandha, shatavari etc. one such drug is vatada. The current article highlights about the review of vatada. And its balya activity.

INTRODUCTION

According to Ayurveda the ultimate goal of human being is to achieve salvation or moksha. Ayurveda defines Arogya, as a state of equilibrium of both mind and body, one can achieve his goal, if he has good physical strength & a healthy mind strength is the base of sound health and in born power to resist both physical & mental stress, if this is altered then a person will become susceptible to disease.
Strength is very essential, bala may be acquired either innately or artificially bala can also be co-related to immunity where the body has the ability to neutralize, the effect of pathogenic micro organism & their toxic effects. This has been assigned to prakrita sleshma, which nourishes the whole tissue of the body, this also can be called as ojas.
Now a days because of mechanical life, with an advancement of science & technology, people are becoming more prone to stress & strain, as well as susceptible to many Immunosuppressive Diseases.
The drugs used in conventional system of medicine to treat this condition have many adverse reactions. Also it is proved that many antidepressant drugs which are used very commonly, to relive stress, strain have many adverse reactions in body. Thus it becomes imperative to search for a drug possessing Balya, antistress activity, which is devoid of ADR, etc, Ayurvedic pharmacopeia has many such drugs like Ashwagandha shatavari etc.
Almonds are a nutrient dense protein source & a unique package of nutrients such as vitamin E, Folic acid, Protein, Fibers, iron, zinc, copper, Magnesium, phosphorous, Phytochemicals.
Vatada is one such drug which is having its reference in context of Bhruhatrayee having Madhura rasa, ushna veerya, guru and snigdha guna, has been attributed with Balya, santarpana & Vrishya activity. This is also available in abundance hence the present study is selected to evaluate its Balya activity.

DRUG REVIEW

VEDIC PERIOD - In ancient period we don't find any reference about drug Vatada.
Charaka samhita – In sutrasthana among phalavarga vatada has been mentioned.
Sushrutha samhita – in sutrasthana among phalavrga it has been mentioned.

VERNACULAR NAMES

Arabic – louz, laws.
Gujarath – Badami
Hindi – Badam
Kannda – Badami
Malayalam- badam
Marathi – Badam
Sanskrith – arook, arukam, vatavairi.
Telugu – Badamu.
Tamil – vadumai, patam
Urdu- shirin, magz badam

CLASSIFICATION ACCORDING TO DIFFERENT AUTHORS

Charaka – Phala varga
Sushrutha – Phala varga
Astanga sangraha – Phala varga
Astanga sangraha – Phala varga
Bhava prakasha – Amradi Phala
Madhanaphala – Phala varga

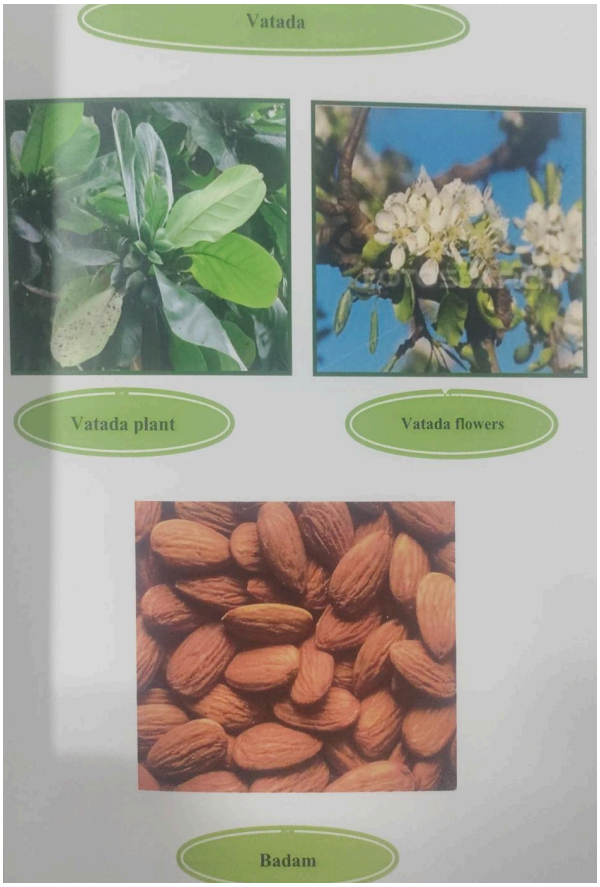
VARIETIES

Sweet almond – Prunus dulcis
Bitter almond – Prunus amara

MORPHOLOGY

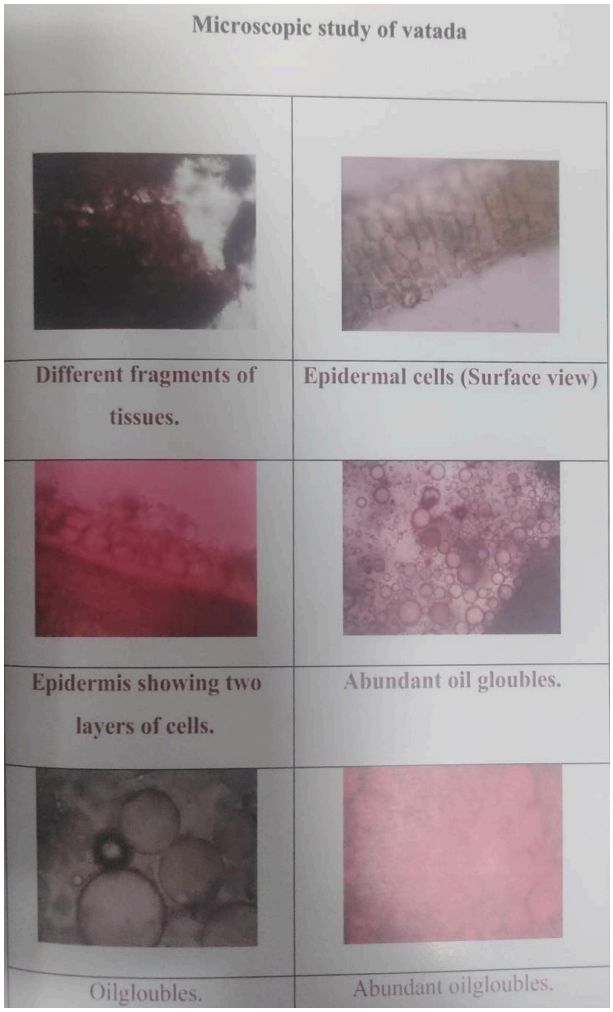
Habitat- Grown in the countries bordering the mediteranian cultivated in Kashmir and Punjab at an altitude of 760-400mts.
Habit- A middle sized tree, grows up to 8 meters height.
Leaves- simple alternate, greyish when full grown, oblong lanceolate, serrulate, petiole equal to or longer than the greatest width of leaf, stipules fimbricate.

Flowers – white tinted with red, appearing before leaves grow scaly buds on last layers wood, peduncles much shorter than the campanulate calyx.
Fruits- drupe, velvety, pericarp, dry, when ripe separating into two valves, stone compressed with shallow wrinkles and holes.



MACROSCOPIC
Generally, one seed is found enclosed in each stony shell, however tow seeds are also found sometimes. The oil seeds are also found sometimes. The oily seeds are about 2-2.5cm long and 1-1.5 cm wide laterally flattened, rounded at one end while tapering at micropylar end and almost albuminous. The outer most covering of the seed is thin membranes, rough, brown colored seed coat. It is marked with many longitudinal striations. The seed coat is easily removed when soaked in water. Embryo is made up of two large slightly elongated Plano-convex cotyledons, hinged together by a small axis and radical 1 seeds are of un equal size and folded irregularly, weight of one seed varies from 0.67-1.53gms.

MICROSCOPIC
Microscopic examination of cross section of seed reveals that it is made up of about 0.25mm. thick brownish seed coat. Epidermis, the outermost layer of the testa is represented by greatly enlarged thick walled papilliform cells the lower half of which appears to be pitted some thin walled or unspecialized cells are also found separating the papilliform cells. The cells of middle region and tegmen are almost crushed. The inner epidermis of tegmen persists as a single layer of small thick walled compactly arranged tubular cells. The single layered endosperm consisting of comparatively thin walled larger parenchymatous cells is often found persisting in mature seeds. The two cotyledons are made up of thin walled parenchymatous cells densely filled with protein in form of aleurone grains.



STUDY OF POWERED DRUG
As the seed are oily, a coarse powder is produced on grinding. It is creamy white in color, sweet in taste and devoid of any characteristic odor.

FLOWERING AND FRUITING
July to September.

EXPRESSION OF THE SEED OIL.
Almond oil is obtained by grinding the seeds and expressing them in canvas bags between slightly heated iron plates. They are sometimes blanched before grinding. The oil is clarified by subsidence and filtration.

PROCEDURE AND TIME OF COLLECTION
The almond crop comes to harvest from july to September, when the fruits ripen, the husk or flesh splits open exposing the stone begins to fall. In india the harvested fruits are

cleaned of the skin by hand, in USA Machines are used for this purpose.

Preservation and storage- after cleaning the almonds are dried in sun for short time, over exposure to sun is avoided as the cells may turn dark and unattractive they are often bleached by exposing the steamed material to sulphur fumes to give surface of shell a bright yellow color. Seeds are stored in shade and kept in air tight container.

Substitutes and Adulterants – Bitter almonds are sometimes found in samples of sweet almonds. The shells consisting mainly of sclrerochymatous cells are sometimes ground and used to adulterate powdered drugs.

NUTRITION FACTS AND INFORMATION ABOUT ALMOND

Almond is incredibly rich in minerals like Manganese, Magnesium, Copper, Phosphorous, iron, Zinc, Potassium, Selenium is also present in good amount.

Vitamin content of an almond – These are small nuts are a powerhouse of vitamin E, Riboflavin, Thiamine, Niacin and foliate good amount of Vitamin B6 and Pantothenic acid are also present.

Calorie content of an almond- Almonds have large calorie content, being 575.0 per 100gm.

PHARMACOLOGICAL ACTIVITIES

Sweet Almond – Demulcent, stimulant, nutritive, nervine tonic, emollient, thermogenic, galactogogue, aphrodisiac, laxative, diuretics, lithotriptic.

Bitter almond – Emollient, demulcent, laxative, sedative, astringent, attenuent, lithotriptic, iuretic, antispasmodic, antiseptic, anthelminthic, rejuvenating.

DISEASE REVIEW

The word bala finds refrences in vedic era, the prayers for seeking bala as well as the bala itself being worshiped as God are found in Rigveda and Chandogyopanishad.

Bala is that which overcomes the disease factor in the body.bala literally means the strength and it is being used as suffix at various contexts as dehabala, agnibala, indriya bala, satwabala, vyadibala etc.

The concept of Bala dealt in Ayurvedic classics refers to both physical strength and immunity.

In other contexts, the prakrita kapha is considered as bala and further kapha is considered as synonymous to Ojas. According to Vagbahata ojas itself is Bala.

TYPES OF BALA

Sahaja bala- it is inherent and natural. This bala refers to both body and mind. sahaja bala is that which persists from birth and it is charecterised by progressive increase on proportion of growth and development of an individual. This can be correlated to innate immunity.

Kalaja bala- it refers to periodic type of bala, which is influenced by seasonal traits and age of an individual.

Causes Of bala hani- Vyayama, fasting, anxiety, ruksha alpa ahara, prajagara, kapha adhika, rakta and shukra adhika, Bhutopagata.

DISCUSSION

Vatada belong to rosaceae family. Description about vatada can be traced from samhita period. We don't find any reference in vedic period. Classical texts like charaka and sushrutha samhita describes it under phala varga. Vatda is attributed with madhura rasa, ushna veerya, guru and snigda guna its dosha karma is vatagna, majjapittanilahapaha, kaphakrit and vrishya and hence increasing the bala it is available in two varieties, sweet and bitter variety. sweet almond has pharmacological activities like Demulcent, stimulant, nutritive, nervine tonic, emollient, thermogenic, galactogogue, aphrodisiac, laxative, diuretics, lithotriptic. And bitter almond is Emollient, demulcent, laxative, sedative, astringent, attenuent, lithotriptic, iuretic, antispasmodic, antiseptic, anthelminthic, rejuvenating. Hence vatada helps in decreasing stress and strain by promoting balya.

CONCLUSION

The present literature supports the potential of vatada as a medicinal tree which is extensively used in the Aurveda and its macroscopic and microscopic features can be utilized to identify genuine prunus amygdalus.by considering the pharmacological properties and rasa panchaka it will help in decreasing stress and strain by promoting balya.

In view of nature of this plant more reaserches has to be conducted on its cultivation and substitution.

REFERENCES

1. Amarasimha, Amarakosha, (Kannada commentary) 2nd edn Banglore, Suvidya prakashana 1996.
2. Ayurvedic Pharmacopia of india part 1 volume 2 1st edn govt of india ministry of health and family welfare, dept of indian system of medicines and Homeopathy, 1990:127
3. Bhavamishra, Bhavaprakasha nigantu(comm:Vishwanath dwivedi shastry)Delhi, Motila banarasidas, 9th edn 1998:42,462
4. Bhattacharya SK Goel RK, Karur, Goshal S "Antistress activity of sitoindosides , New actysterlglucosides from withania somnifera, Phytotherapy res 1987:32-39
5. Charakacharya, charaka samhita . with chakrapani commentary, Varanasi, chaukamba Sanskrit sansthana, 4th edn 1994
6. Chatajee CC human physiology volume 2, Calcutta, medical allied agency, west Bengal india, 1994, 10th edn page 5/264
7. Guyton C Arthur, hall E John, Text book of medical physiology 9th edn, Pennsylvania, US WB saundars company.1996.
8. Nadakarni KM Indian material medica vaolume 1 bombay, popular prakashana 3rd edn 1982.
9. Vagbatacharya, astanga sangraha hindi commentary bu kaviraj atridev gupta, volume 2, Varanasi Krishnadas Academy, 1993.