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देश के विभिन्न प्रान्तों में धन्वन्तरि जयन्ती एवं अन्य कार्यक्रमों की झलकियाँ



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सम्पादक मण्डल के सभी सदस्य मानद एवं अवैतनिक हैं। पत्रिका के लेखों में व्यक्त विचार लेखकों के हैं। सम्पादक एवं प्रकाशक का उससे सहमत होना आवश्यक नहीं है। आपके सुझावों का सदैव स्वागत है।

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सम्पादकीय

भारत में वर्तमान समय में आयुर्वेद चिकित्सा की प्रासङ्गिकता पर समाज का एक पक्ष सवाल उठा रहा है और आयुर्वेद चिकित्सक चिन्तित हैं। आरोप प्रत्यारोप का दौर चल रहा है एवं एक दूसरे के ऊपर श्रेष्ठता स्थापित करने का प्रयास भी, किन्तु कोई भी पक्ष यह मानने को तैयार नहीं है कि कोई भी चिकित्सा पद्धति पूर्ण नहीं है। हर रोग की चिकित्सा एक पैथी से सम्भव नहीं है। यदि ऐसा होता तो राज्याश्रय के बाद स्वतन्त्रता के सातवें दशक में सबको स्वास्थ्य सेवा उपलब्ध हो जाती। कारण की चर्चा के क्रम में अनेक कमेटियों का गठन एवं अनेक सुझाव लागू करने के प्रयास किये गये। परिणाम सन्तोषप्रद नहीं रहा। सरकार के माथे पर चिन्ता की लकीरें स्पष्ट हैं। वैज्ञानिक इसे अब भी समझने का प्रयास कर रहे हैं। नीति निर्धारक परेशान हैं। जिम्मेदारी किसकी है? क्या हम अपनी सोच को संकुचित करके बयानबाजी करते रहेंगे? माननीय प्रधानमंत्री श्री नरेन्द्र मोदी जी अपने भाषण में व्यथा व्यक्त कर चुके हैं। आयुर्वेद चिकित्सकों को दिशा निर्देश दिया है। एक कदम आगे बढ़कर आयुष मन्त्री की नियुक्ति इस बात का द्योतक है कि वह आयुष चिकित्सा के प्रति संवेदनशील एवं गम्भीर हैं। युवा चिकित्सा शिक्षक वैद्य राजेश कोटेचा जो वर्तमान में गुजरात आयुर्वेद विश्वविद्यालय, जामनगर में कुलपति हैं, को भारत सरकार द्वारा पद्यमश्री से अलंकृत करना युवा चिकित्सा शिक्षक के लिए प्रेरणास्पद है। शुद्ध आयुर्वेद, मिश्रित आयुर्वेद, कमियाँ एवं विवादास्पद मुद्दों से ऊपर उठकर चिन्तन, आत्मावलोकन की आवश्यकता है। एक कार्यशैली को विकसित करने का प्रयास आवश्यक है। कोई कार्य छोटा एवं एक से सम्भव नहीं होता। समग्र प्रयास की आवश्यकता है। जीवन को आयुर्वेद सिद्धान्तों के आधार पर स्वयं ले चलने का प्रयास प्रारम्भ करें, तभी समाज उसका अनुकरण करने के लिए प्रेरित होगा।

किसी भी समाज को आगे ले जाने की जिम्मेदारी, उनकी शिक्षा, उनका दिशा निर्देशन उस विषय के शिक्षकों का है। शिक्षक किंकर्तव्यविमूढ़ बना हुआ है। आयुर्वेद विषयों की नियामन संस्था केन्द्रीय भारतीय चिकित्सा परिषद् प्रत्येक वर्ष अपने विषय का स्वरूप बदलती रहती है। व्यावसायिक सत्रों का निर्धारण बदलते रहना, विषय वस्तु को एलोपैथी चिकित्सा के समकक्ष लाने के प्रयास में माडर्न विषयों का आवश्यकता से अधिक प्रवेश, प्रत्येक वर्ष मान्यता के नाम पर विजिटेशन, प्राइवेट कालेजों को व्यसाय के रूप में चिन्हित करना, शासकीय कालेजों की उपेक्षा, आयुर्वेद के विकास के बजाय स्व के विकास की चिन्ता आदि आरोप लगाने वालों का तर्क है कि इनकी वजह से ही आयुर्वेद का विकास अवरूद्ध है। शासकीय शिक्षकों का समय से प्रमोशन न होना, प्राइवेट कालेजों में पेपर पर नाम चलने के बाद उच्च शिक्षा संस्थानों में चयन, विभिन्न संस्थानों में नियुक्ति के अलग-अलग मापदण्ड, प्राइवेट कालेजों में शिक्षकों का शोषण आदि ऐसे ज्वलन्त बिन्दुओं पर शिक्षक अपने आक्रोश व्यक्त करते रहते हैं। अभी-अभी अखिल भारतीय आयुर्वेद संस्थान नई दिल्ली के लिए विज्ञापित शिक्षकों का अर्हता का उद्देश्य क्या सीमित संस्थानों के लिए है? जबकि लगभग 300 आयुर्वेद शिक्षण संस्थान पूरे भारत वर्ष में हैं।

इन विषम परिस्थितियों में शिक्षकों की उदासीनता को समझा जा सकता है, किन्तु शिक्षक भी अपने उद्देश्य से भटके हुए प्रतीत होते हैं। अपने मुख्य कार्य से विरत न होकर समग्र आयुर्वेद के विकास के लिए मार्गदर्शन करना उनका पुनीत कर्तव्य है। कर्तव्य के बाद ही अधिकार मांगना समीचीन होगा। अंधकार हमेशा नहीं रहता है। सकारात्मक प्रयास, निरन्तर स्वाध्याय, मनन एवं चिन्तन की आवश्यकता है, जो आपको आज नहीं तो कल विजय जरूर दिलायेगी। अपेक्षाकृत युवा आयुर्वेद शिक्षकों का ऊर्जावान प्रयास कहीं-कहीं तो स्पष्ट है, परन्तु इसमें और अधिक चेतना एवं प्रेरणा की आवश्यकता है। आपकी शिथिलता और गलत निर्णय आने वाले समय में अंधकार न फैलाये, ये आपसे अपेक्षा समाज को है। आइये हम सब मिलकर माननीय प्रधानमंत्री श्री नरेन्द्र मोदी जी एवं माननीय श्रीपद यशो नाईक जी के नेतृत्व में आने वाले समय का सदुपयोग करें तथा समाज के स्वास्थ्य चिन्तन की अविरल धारा प्रवाह को गति दें क्योंकि यदि समाज के प्रत्येक वर्ग के अन्तिम व्यक्ति को शारीरिक, मानसिक एवं सामाजिक स्वास्थ्य प्राप्त होगा तो उसका असर हम पर भी पड़ना अवश्यम्भावी है।

- सम्पादक



SCIENTIFIC APPROACH TO EXPLORE THE NUTRITIONAL FACTS OF AYURVEDIC DOSAGE FORMS

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Abstract:

Nutrition is the factor which is important not only for the maintenance of health but also needed equally in the condition of illness. Various dosage forms are given in *Ayurveda*, which can be used according to disease and patient. Ingredients like honey, sugar, milk, oil and fats have been used in these different preparations such as *Swarasa* (expressed juice), *Kalka* (paste), *Kwatha* (decoction) *Avaleha* (electuary), *Asava* and *Arishta* (medicinal preparations containing alcohol), *Ksheerapaka* (dosage form containing milk as a base), etc. In *Avaleha Kalpana* (electuary), the ingredients like *Swarasa* (expressed juice)/ decoction of drugs, sugar, honey and some additives like *Dalachini* (*Cinnamomum zeylanicum*), *Ela* (*Elettaria cardamom*), *Nagakeshar* (*Mesua ferrea*) etc. are used. The sugar, honey and these additives have their own nutritive values. The present research paper deals with the nutritional facts of *Ayurvedic* dosage forms after an extensive review of *Ayurvedic* literature as well as modern scientific data.

Key Words: Nutrition, Ayurveda, dosage forms

Introduction

Ayurveda has originated from God *Brahma*¹ and later on it was taught to different scholars like *Charaka*, *Sushruta*, *Vagbhata*, *Kashyapa* etc. It has two objectives : the first one is protection of health

of a healthy human being from ailments and the other one is to conquer the disease of a patient.² These objectives can be fulfilled only after knowing *Hetu* (etiology), *Linga* (sign and symptoms of the disease) and knowledge about *Aushadha* (drug).³ A good drug is one that has qualities like easy availability, potency of conquering the disease and convertibility into different dosage forms.⁴ Various dosage forms have been described in *Ayurvedic* texts for the treatment of a patient. These dosage forms include the *Kalpana* (medicinal preparations) like *Swarasa* (expressed juice), *Kalka* (paste), *Kwatha* (decoction), *Hima* (cold infusion), *Phanta* (hot infusion) and various other *Kalpanas* (preparations) derived from these fundamental *Kalpanas* (preparations) like *Sneha* (oily and fatty preparations), *Avaleha* (electuary), *Asava* and *Arishta* (medicinal preparations containing alcohol), *Ksheerapaka* (dosage form containing milk as a base) etc.⁵ For the preparation of these medicaments several ingredients are used which possess nutritional as well as pharmacological properties. *Acharya Charaka* has given nine synonyms of medicaments which are *Chikitsa* (treatment), *Vyadhihara* (disease removal), *Pathya* (wholesome agent), *Sadhana* (means of treatment), *Aushadha* (drug), *Prayashchita* (corrective), *Prashamana* (alleviator), *Prakriti Sthapana* (restoration) and *Hita* (one which is beneficial).⁶ Of these synonyms *Pathya* and *Hita* are indicative of

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quality of medicine having nutritive value as well as the *Pathya* means conducive to health and *Hita* means all the agents, which are responsible to sustain the body of an individual in its natural state of equilibrium.⁷ This term is originally translated as things which are useful or beneficial.

Ayurvedic dosage forms

Ayurveda has described various dosage forms. These can be categorized under fundamental and derived dosage forms. Fundamental dosage form includes *Swarasa* (expressed juice), *Kalka* (paste), *Kwatha* (decoction), *Hima* (cold infusion) and *Phanta* (hot infusion). From these fundamental dosage forms several other dosage forms are derived like *Churna* (powders), *Vati* (tablets), *Ksheerapaka* (milky preparations), *Avaleha* (electuary), *Sneha* (oily and fatty preparations), *Asava* and *Arishta* (preparations obtained by fermentation and containing alcohol) etc. *Swarasa* (expressed juice) can be obtained by pressing the drug in a machine while *Kalka* (paste) can be made by rubbing the drug with the help of stones. Medicine prepared by boiling a drug on the fire is known as *Kwatha* (decoction). When the drug is soaked in water and it is left for whole night and used on next day after filtration, then it is known as *Hima* and when the drug is soaked for a few times in hot water and used after filtration then it is known as *Phanta* (hot infusion).⁸ These dosage forms can be administered by mixing the *Prakshepa Dravya* (additives) like sugar, honey, *Guda* (jaggery), *Saindhava* (rock salt) etc. in a fixed quantity according to the disease of the patient. (Table No. 1)

Avaleha (electuary) can be prepared by *Kwatha* (decoction)/ *Swarasa* (expressed juice) of drugs, sweetening agents like jaggery, sugar, *Ghee* (clarified butter), honey and adjuvants like *Dalchini* (*Cinnamomum zeylanicum*), *Ela* (*Elettaria cardamom*), *Nagakeshar* (*Mesua ferrea*) in powder form.⁹ *Ghrita* and *Taila* (medicated fatty and oily preparations) can be made by taking *Ghrita*, *Taila* (oil) and liquid like water, decoction, *Swarasa* (juices)

milk, curd etc and paste of certain drugs in specific ratio¹⁰ whereas *Ksheerapaka* (milky preparation) can be made by taking milk, drug and decoction in specific ratio.¹¹ *Asava* and *Arishta* can be prepared by taking either water or decoction of specific drugs, jaggery sugar, honey and *Prakshepa Dravyas* (additives) like *Dalchini* (*Cinnamomum zeylanicum*), *Ela* (*Elettaria cardamom*), *Nagakeshar* (*Mesua ferrea*) and *Twaka* (*Cinnamomum zeylanicum*) in powder form. The whole material is put and packed in an appropriate vessel and is kept for a specific period of time to obtain the required *Asava* or *Arishta*.¹² The normal dose of *Swarasa* (expressed juice) is half *Pala* (20 ml),¹³ *Kalka* (paste) 1 *Karsha* (10 gm)¹⁴ and that of *Kwatha* (decoction)¹⁵, *Hima* (cold infusion)¹⁶ and *Phanta* (hot infusion)¹⁷ is 2 *Pala* (80 ml)¹⁵ and of *Avaleha* (electuary)¹⁸ and *Ghrita* is one *Pala*¹⁹ i.e. 48 gm and of *Ksheerapaka* (milky preparation) is 2 *Pala*²⁰ i.e. 80 ml while normal dose of *Asava* and *Arishta* is 1 *Pala* (40 ml).²¹ The *Avaleha* (electuary), *Sneha* (fat and oil), and *Asava-Arishta* have greater shelf life in comparison to *Swarasa* (expressed juice), *Kalka* (paste), *Kwatha* (decoction) etc.²²

Discussion

Ayurveda the 5000 year old medical system of India states that poor nutrition is one of the causes of disease. This system uses food specifically to heal and prevent diseases. It advocates regular intake of those dietary substances, which maintain health i.e. that maintain the superior health along with preventing those diseases, which have not emerged in the body.

There are different concepts of nutrition. The most commonly studied aspect is the one based on laboratory research on how the various food components of our diet are digested, absorbed and metabolized to carry out various activities of the body. It also helps to understand the various diseases which occur due to malnutrition and deficiency. The three basic nutrients, which constitute our diet are carbohydrate, fats and proteins. *Ayurvedic* dosage



forms also contain these nutrients which are derived from sugar, jaggery, *Ghee*, oil, milk etc, which are either ingredients of the preparation or mixed as additives.

According to *Acharya Charaka* medicines are of two types.²³ some of them tone up the health of a healthy person and others remove the ailments of a patient. The medicines belonging to the first category are considered to be useful for a healthy person. These medicines are *Chyavanprasha*, *Brahma Rasayana*, *Amalaki Ghrita*, *Bhallataka Ksheera* help in the maintenance of an excellent physique and therefore these medicines are also known as *Urjaskara*.²⁴ In current medical practices such properties have been described in the nutraceuticals, which are products derived from food sources that are purported to provide extra health benefits in addition to the basic nutritional value found in foods. Depending on the jurisdiction, products may claim to prevent chronic diseases, improve health, delay the aging process, increase life expectancy or support the structure or function of body.

Swarasa (expressed juice) is considered as most primitive dosage form and it can be given to the patients by adding honey sugar, jaggery etc depending upon the nature of the disease.²⁵ Likewise in the other dosage form such as *Kalka* (paste), *Kwatha* (decoction), *Hima* (cold infusion) and *Phanta* (hot infusion) before administration to the patient it is advised that physician can mix *Madhu* (honey), *Sharkara* (sugar), *Guda* (jaggery), *Lavana* (rock salt), *Jeera* (*Cuminum cyminum*), *Shilajeet* (Asphaltum) etc.²⁶ (Table No.1) Honey, sugar and jaggery having good nutritive value are rich in carbohydrate. Jaggery contains 65-85 percent sucrose, 10 to 15 percent invert sugar and 2.5 percent ash. It is a food article which is used particularly in India. Sugar is also used in various food articles and is chiefly composed of sucrose which is a good source of energy. *Guda* (Jaggery) is rich in minerals, iron and instant glucose. It is the only preparation which is extremely useful for human body. Honey is mixture of sugars, water and other compounds. It also

contains enzyme that help in digestion and also contains several antioxidants. It is composed mainly of fructose and glucose. It is widely used in various confectionary products due to its good nutritive value. (Table No.2)

The drugs like black pepper (*Piper nigrum*), Cardamom (*Elettaria cardamomum*), Ginger (*Zingiber officinale*), Cinnamom (*Cinnamomum zeylanicum*), Mace and nutmeg, two species of the same tree *Myristica fragrance* etc. which are extensively used as *Prakshepa Dravya* (additive) in *Ayurvedic* medicines come under the category of spices. These spices have some nutritional value as well as they have aromatic characters so that they increase the palatability of any drug. (Table No.3) *Ksheerapaka* is one of unique preparations of *Ayurveda*. Here milk is used as a media and it has capability to dissolve water soluble, protein soluble and some extent to fat soluble ingredients. Here milk works as medicament as well as nutrient because it is supposed as balance diet. As per *Ayurveda* regular intake of milk works as bet *Rasayana* (rejuvenative).²⁷ It contains all nutrients and is rich in high quality protein, calcium, phosphorous, riboflavin and B – vitamins. (Table No.4)

Avaleha Kalpana (electuary) like *Chyawanaprasha* is used to increase the *Bala* (stamina). It can be used in growing age children to improve the overall growth of the body. It also improves the lusture of the skin.²⁸ *Chyawanaprasha* is prepared by taking *Kwatha* (decoction) of certain drugs, honey, sugar, *Ghee*, fresh fruits of *Amalaki* (*Emblia officinalis*) and powder of *Pippali* (*Piper longum*), *Ela* (*Elettaria cardamomum*), *Twaka* (*Cinnamomum zeylanicum*) and *Nagakeshar* (*Mesua ferrea*) being used as additives.²⁹ A study done by Singh H. K. et.al. on *Chyawanaprasha* has shown that it contains vitamin C in varying amount. Its maximum percentage was in the laboratory sample being 4% as against the market samples 0.4-2.0 % whereas percentage of protein was almost 5% in the laboratory as well as market sample. The percentage of free sugar was more than 10%.³⁰ Ojha et. al. have



reported that albino rats fed with *Chyawanaprasha* showed retention of nitrogen and an increase in body weight.³¹

There are two sources of unctuous substance viz. vegetable and animal. Of these oil of *Tila* (*Sesamum indicum*) from vegetable source is considered as best.³² *Ghrita*, oil, muscle fat and bone marrow are the four types of unctuous substances. Out of these *Ghrita* is regarded as the best one.³³ According to *Ayurveda*, *Ghrita* means Cow's *Ghee* whereas *Taila* word is indicative of sesame oil. In general consideration cow ghee is used to promote memory, intellect and power of digestion whereas sesame oil provides stamina, improves the lusture, promotes memory and intellect etc.³⁴ These two are mainly used as a base material for preparation of *Sneha Kalpana* (oily and fatty preparations).³⁵

Lipids serve the functions like acting as storage form of energy, structural components of bio membranes, providing insulation against changes in external temperature, helping in absorption of fat soluble vitamins such as A,D,E and K. It shows their importance for the body. They also increase the palatability of the food. Linoleic and linolenic acids are called essential fatty acids and have to be supplied in diet. These acids can be obtained from vegetable oils.³⁶ The nutritional value of Cow's *Ghee* can be understood by the fact that 1 table spoon of Cow's *Ghrita* contains energy 469 KJ, fat 12.73 g, protein 0.049, potassium 1 mg, and Vit. A & E³⁷ whereas Sesame seed (per 100 g of edible portion) contains 5.3 % moisture, 18.3 % protein, 43.3 % fat, fiber 2.9 % and carbohydrate 25%. It also contains Ca, P, Fe and vitamins like thiamine, riboflavin, niacin, and vitamin C.³⁸ During the preparation many other materials like water, *Swarasa* (expressed juice), *Kwatha* (decoction), milk etc are mixed with *Ghrita* and *Taila*, then it is heated but it may restore its nutritional value as lipids undergo hydrolytic, oxidative polymeric or other degradative changes which modify not only the physical properties of the lipid but also their biological properties when heated. The hydrolytic and oxidative changes result in

rancidity. Hydrolytic rancidity by itself does not bring about any significant change in the nutritive value of the food.³⁹

Asava are having general property of improving the working power of mind and body. These are also used in *Shoka* (grief), *Anidra* (insomnia) and *Aruchi* (anorexia).⁴⁰ Alcoholic beverages are judged in terms of flavor and stimulant effect and hardly at all as sources of calories. However, the calorific value of alcohol is 7 Kcal /g. In case of distilled liquors (whisky, brandy etc.) the calorific value is only due to alcohol and consumption of 100 ml of these beverages would yield about 230 Kcal of energy. Beer and wine contain some nutrients present in the original malted barley and the fruit juice used in their preparation and naturally their energy value would be higher than that of distilled liquors. Similar to these preparations in *Ayurveda* are known as *Sura*, *Varuni* [(fermented products of *Tada* (*Borassus flabellifer* L.) and *Khajoor* (*Phoenix sylvestris*)], *Madhulika* (fermented product prepared from barley), *Madhvasava* [(prepared from the combination of Jaggery and *Mahua* (*Madhuka indica*)].⁴¹ Nutritional facts of *Asava-Arishta* is also supported by scientific study done by M. Alam et al on the *Khadirarishta* shows that the pH of the fermented drug was 3.24, specific gravity 1.159, total solid content 30.53 %, total sugar 26.15 %, alcohol 6.12 %.⁴²

Conclusion

Ayurveda is one of the oldest systems of medicine being practiced in India. Various dosage forms are described in this system of medicine. Ingredients like honey, jaggery, milk, sugar, *Ghee* (butter), oil and additives such as *Dalchini* (*Cinnamomum zeylanicum*), *Ela* (*Elettaria cardamom*), *Nagakeshar* (*Mesua ferrea*) etc. are used in the preparation various medicines. On the basis of literary review and its supplementation with scientific data, it is concluded that *Ayurvedic* dosage forms act as medicine as well as proved nutrition to the body which is required during the illness of a patient.



Table No. 1 : Recommended quantities of *Prakshepa Dravya* (additives) in different dosage forms

		<i>Swarasa</i>	<i>Kwatha</i>	<i>Kalka</i>	<i>Hima</i>	<i>Phanta</i>	<i>Churna</i>
1.	Madhu	1 Kola=5 g	1/16,1/8,1/4 parts for <i>Vata</i> , <i>Pitta</i> , <i>Kapha</i> diseases respectively (5 g,10g,20g)	2 Karsha=20g	5g,10g,20 g for <i>Vata</i> , <i>Pitta</i> , <i>Kapha</i> diseases respectively	5g,10g,20 g for <i>Vata</i> , <i>Pitta</i> , <i>Kapha</i> diseases respectively	-
2.	Sharkara	1 Kola=5 g	1/4,1/8,1/16 parts for <i>Vata</i> , <i>Pitta</i> , <i>Kapha</i> diseases respectively (20g,10g,5g)	1 Karsha=10g	20g,10g,5 g for <i>Vata</i> , <i>Pitta</i> , <i>Kapha</i> diseases respectively	20g,10g,5 g for <i>Vata</i> , <i>Pitta</i> , <i>Kapha</i> diseases respectively	2 Karsha= 20 g
3.	Guda	1 Kola=5 g	1 Karsha=10g	1 Karsha=10g	1 Karsha =10g	1 Karsha =10g	1 Karsha=10 g
4.	Kshara	1 Kola=5 g	1 Shana=3 g	-	1 Shana=3g	1 Shana=3g	-
5.	Lavana	1 Kola=5 g	1 Shana=3 g	-	1 Shana=3g	1 Shana=3g	-
6.	Ghrta	1 Kola=5 g	1 Karsha=10g	2 Karsha=20g	1 Karsha=10g	1 Karsha=10g	2 Karsha= 20 g
7.	Taila	1 Kola=5 g	1 Karsha=10g	2 Karsha=20g	1 Karsha=10g	1 Karsha=10g	-
8.	Jeera	1 Kola=5 g	1 Shana=3 g	-	1 Karsha=10g	1 Karsha=10g	-

Source: *Sharangadhara Samhita* , with Hindi commentary by Dr. S.Srivastava ,Chaukhambha Orientalia ,Varanasi,2nd Edition ,1998



Table No. 2 : Honey –Composition

Nutritional value per 100 g	3.502
Energy	1272 KJ (304 KCal)
Carbohydrate	82.4 g
Sugars	82.12g
Dietary fibres	0.2 g
Fat	0 g
Protein	0.3 g
Vitamins-	
B2	0.038 mg (3%)
B3	0.121 mg (1%)
B5	0.068 mg (1%)
B6	0.024 mg (2%)
Folate	2 Micro gram (1%)
Vit C	0.5 mg (1%)
Trace Metals	
Ca	6 mg (1%)
Fe	0.42 mg (3%)
Mg	2 mg (1%)
P	4 mg (1%)
K	52 mg (1%)
Na	4 mg (0%)
Zn	0.22 mg (2%)
Water	17.10 gm

mg= milligram,IU= international Unit

Source: Honey- Wikipedia, the free encyclopedia, en.m.wikipedia.org/wiki/Honey, downloaded on 17 Sept. 2014



Table No. 3 : Nutritive Value of Different drugs used as *Prakshepa Dravya* (additives)

	Marich (<i>Piper nigrum</i>)	Ela (<i>Elettaria cardamomum</i>)	Sunthi (<i>Zingiber officinale</i>)	Twaka* (<i>Cinnamomum zeylanicum</i>)	Haridra (<i>Curcuma longa</i>)
Moisture	8.7-14 %	7.0-10 %	6.9	-	5.8
Total nitrogen	1.55-2.60 %	-	-	-	-
Fat	-	-	6.4	1.2 g/100g	8.9
Starch (carbohydrate)	28-49 %	39-49 %	66.5 %	80.6 /100 g	63 %
Crude fiber	8.7-14 %	-	5.9 %	53.1 g/100 g	-
Protein	-	7-14 %	8.6%	4.0 g/100 g	8.6%
Ash	3.5-5.7 %	3.8-6.9 %	-	-	-
Ca	-	0.3 %	-	-	0.2%
Vitamins					
Thiamine	-	1.8 %	0.05%	-	0.09 %
Niacin	-	2.3	1.9	-	4.8 %
Riboflavin	-	0.23	0.13	-	0.19
Vit. A	-	175 I.U. / 100 gm	175 I.U. / 100 gm	-	175 I.U. / 100 gm
Ascorbic acid	-	-	12 mg%	-	-
Phosphorous	-	-	-	-	0.26
Iron	-	-	-	-	0.05

Sources: Foods: Facts and Principles, N S Manay and M Shadaksharaswamy , New Age International (p) Limited Publishers, 2nd Edition, 2001 and *Wikipedia, the free encyclopedia ,en.m.wikipedia.org



Table No. 4 : Nutritive value of milks compared (Value per 100 gms)

Constituents	Buffalo	Cow	Goat	Human
Fat (g)	6.5	4.1	4.5	3.4
Protein (g)	4.3	3.2	3.3	1.1
Lactose (g)	5.1	4.4	4.6	7.4
Calcium (mg)	210	120	170	28
Iron (mg)	0.2	0.2	0.3	-
Vit. C (mg)	1	2	1	3
Minerals (g)	0.8	0.8	0.8	0.1
Water (g)	81.0	87	86.8	88
Energy (Kcal)	117	67	72	65

Source: Park.K : Park's Text Book of Preventive and Social Medicine by K.Park; Banarsi Das Bhawan Publishers, Press Nagar, Jabalpur, M.P, 2121 Edition 1997. P 582

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A CONCEPTUAL PATHO-CLINICAL STUDY OF MUTRASHMARI (URINARY CALCULAS)

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ABSTRACT

Ayurveda explains urinary stone under the heading of *Mutra Ashmari*. It classifies *Ashmari* on the basis of symptomatology of *Dosha* and the features of stone.

Mutrashmari is one of the important diseases of *Mutravaha Srotas*. This may be caused due to the intake of adulterated food and polluted water. So, it becomes important to know the details about this disease in terms of *Nidana* (etiological factors), *Samprapti* (Pathogenesis), *lakshanas* (symptomatology), *Upadrava* (complications), *Sadhyasadhya* (prognosis) and *chikitsa* (management) of this disease, in order to treat or prevent the disease.

KEY WORDS: *Mutravyaha Srotas*, *Mutrashmari*, *Mutrakrichhra*, *Ashmari*, *Mutraghata*, Urolithiasis.

INTRODUCTION

Ayurveda, the System of Indian medicine and science of life deals with the well being of mankind. The three great authors namely Charaka, Suśruta and Vāgbhata followed the scientific methods of study to enhance the perception of *Ayurveda* towards humanity. It is said to be one of the eight most troublesome diseases (*Mahagadas*). *Acharya Sushruta*, the pioneer in the art and science of surgery has described widely and comprehensively about *Mutrashmari* along with its classification,

symptomatology, etiology, pathology, complications and its management.

ETYMOLOGY:

“*Ashmanam Rati Dadati iti Ashmari*”^[1] means the formation and presentation of a substance like stone. “*Ashma*” means “stone”- “*Rati*” means “to present”.

NIDANA:

According to *Sushruta*, those who neglect the *Samshodhana* of internal channels and those who are engaged in unwholesome dietary habits become the victim of *Ashmari*. *Acharya Charaka* explained it under “*Mutrakricchra*”. Hence the *Nidanas* of both *Mutrakrichhra* and *Ashmari* can be taken as same. They are practice of excessive exercise, Strong Medicines, *Ruksha Madyapana*, excessive intake of *Anupa mamsa*, *Adhyashana*, *Ajeerna-bhojana*, *Matsya sevana*.^[2]

Etiological Factors According to modern view^[3]

Age:

Urinary stones may occur in any age but it is more common in between the age of 30-40 years.

Sex:

Male are more sufferers than female. The male-female ratio is 41:25. In female, stone formation is less because of low serum testosterone levels, but children have most common oxalate stones.

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Climate:

Hotter areas are more prone to stone formation because of excessive perspiration and fluid loss due to atmospheric temperature, which leads to concentrated urine and output may be diminished. In hot and humid climate, stones are less common than in hot and dry climate. Seasonal variations in dietary oxalate intake are also an important factor in the formation of stone.

Occupation:

High socio-economic group and sedentary workers are more prone to the disease. It has been found in a survey that inadequate physical activity and over saturation may be important factors contributing to the formation of many stones. Occupation like cooking, engine room persons etc. may lead to high environmental temperature. This may be a factor of stone formation.

Diet:

Highly rich protein diet. The exact cause and mechanism of stone formation in urinary system is doubtful. But the following factors may be responsible for the stone formation viz. Vit-A deficiency, Water intake, inadequate urinary drainage, Hyperparathyroidism (Absorption of Calcium increase), Stasis, and Infection etc.

Infection favors stone formation particularly urea splitting organisms like staphylococcus, streptococcus and proteus. They split urea in the urine into ammonia and CO₂ and leading to an alkaline urine in which phosphatic calculi are prone to form stones.

SAMPRAPTI:

Samprapti can be defined as, it is the process which starts from “*Sanchayavastha*” of *Doshas* to

the ‘*Vyadhi Vyaktavastha*’. It is possible through *Samprapti* to assess *Doshas*, *Dushyas*, *Srotodusti* or *Khavaigunya*, *Agni* etc. It is also helpful because proper treatment is only fruitful, if it is applied according to *Samprapti* of disease. It is said that ‘*Samprapti Vighatanama Eva Chikitsa*’. Different views have been stated regarding *Samprapti*, which are as below :-

Sushruta’s View:^[4] a) *Apathya* b) *Asamshodhan Sheela Shlesma* Mixes with *Mutra*, entered into Urinary bladder and turns as shape of gravels (*Ashmari*). Sushruta’s examples for clear understanding of the mechanism of stone formation:-

- i. A new pitcher filled with clear water can also show settling down of muddy particles in due course of time. In the same way the calculi are formed in *Basti*.
- ii. As air & fire of electricity in the sky consolidate water (to form hail storms) similarly *Pitta* located in the bladder, along with *Vayu* consolidates *Kapha* to form calculi.

Charak view :

When *Vata* dries-up the *Mutra* entered into the bladder along with *Shukra*, *Kapha* and *Pitta* then, gradually formation of *Ashmari* occurs. *Charaka* has explained the process of formation of *Ashmari* as similar to that of *Gorochana* in the *Pittashaya* of cows. Both *Kashyapa* and *Vagbhata* accept the views of *Charaka* and further state that the increase or decrease in *Medodhatu* is directly related to the size of *Ashmari*^[5].

Pathogenesis According to modern view:

Various theories have been put forward regarding its pathogenesis, but it is still complex and ill understood.

- i. Crystalloids e.g. uric acid, urea, sodium, potassium, ammonium-magnesium phosphate, calcium carbonate, cystine etc.



- ii. Mucin and chondroitin, sulphuric acid, urochrome are usually classified as colloid but it behaves like a crystalloid.

The calculus consists of a nucleus of organic material and urinary salts deposited in layers around it, bound together by an organic colloid matrix. These crystalloids are present in the urine as shape less granules or crystals. So many theories have been adopted but none has been able to define the exact cause of stone formation in every patient. Following are the main groups of the theories :- i) these theories define that in stone formation; firstly the nucleus takes place either within the cells of the renal papillae or the renal lymphatic system. This nucleus when

comes to renal pelvis, provides a nidus for stone formation. ii) Under these theories the process of stone formation takes in four stages as follows:

- Nucleation phase, during which crystal embryos are formed in the urinary tract.
- The stage in which the initially formed embryos rapidly grow and aggregate to form larger particles.
- The retention of one of these secondary particles, which becomes large enough, is trapped at some narrow point in urinary tract.
- This last stage is the stage of the growth of the trapped particle into a stone.

PURVARUPA:

Purvarupa play a very important role in the diagnosis and treatment of any disorder. It is a stage where the disease is reversible with very little residual damage.

Table 1: Purvarupa of Mutrashmari according to different Acharya's View

S.NO.	Purvarupa	Su.	A.Hr.	A.S.	M.N.	B.P.	Y.R.
1.	<i>Bastipida</i>	+	+	+	+	+	+
2.	<i>Aruchi</i>	+	+	+	+	+	+
3.	<i>Mutrakricha</i>	+	+	+	+	+	+
4.	<i>Bastisirovedana</i>	+	-	+	-	-	-
5.	<i>Mushkavedana</i>	+	-	+	-	-	-
6.	<i>Shephavedana</i>	+	-	-	-	-	-
7.	<i>Jwara</i>	+	+	+	+	+	+
8.	<i>Avasada</i>	+	-	-	-	-	-
9.	<i>Bastigandhatwa</i>	+	+	+	+	+	+
10.	<i>Sandramutra</i>	+	-	-	-	-	-
11.	<i>Avilamutra</i>	+	-	-	-	-	-
12.	<i>Bastiadhmana</i>	-	+	+	+	+	+

RUPA:

Signs & Symptoms when fully manifested are called Rupa. This is the stage when the disease comes out with full signs and symptoms indicating the specific characteristics of the disease like the dominance of Doshas.



Table 2: Rupa of Mutra Ashmari according to different Acharya's View

S.no.	Rupa	Su.	Ch.	A.Hr.	A.s.	M.N.	B.P.	Y.R.
1.	<i>Nabhivedana</i>	+	-	+	+	+	+	+
2.	<i>Sevanivedana</i>	+	+	+	+	+	+	+
3.	<i>Mehanavedana</i>	+	+	-	-	-	-	-
4.	<i>Mutrardharasanga</i>	+	-	-	+	-	-	-
5.	<i>Mutravikirana</i>	+	-	-	-	-	-	-
6.	<i>Gomedaparakasha</i>	+	-	+	+	+	+	+
7.	<i>Atyavilam</i>	+	-	-	+	-	-	-
8.	<i>Sasiktam</i>	+	-	-	+	+	+	+
9.	<i>Dhavan,plavan</i>	+	-	-	+	-	-	-
10.	<i>Vishirnadhara</i>	-	+	+	-	-	-	-
11.	<i>Sarudhiramutra</i>	+	+	+	+	+	+	+
12.	<i>Mrudantimedra</i>	-	-	-	-	-	-	-
13.	<i>Mutraroda</i>	-	+	+	-	+	+	+
14.	<i>Atimutratam</i>	-	-	-	-	+	-	-
15.	<i>Pratatamroditi</i>	-	-	-	-	-	-	-

UPASHAYA-ANUPASHAYA:

The factors which relieve the signs and symptoms of disease are called Upashaya, while the factors which aggravate the disease are called Anupashaya. None of the Ayurvedic texts have mentioned about Upashaya-Anupashaya in relation to Mutrashmari. But main factor involved in *Ashmari* formation is Kapha Dosha. Hence, all the measures leading to control of Kapha are considered as Upashaya and those which vitiate Kapha are Anupashaya of *Ashmari*.

CLASSIFICATION OF ASHMARI

All Acharyas except Charaka have classified the disease Mutrashmari into four types: i) Shlesh maja *Ashmari* ii) Pittaja *Ashmari* iii) Vataja *Ashmari* iv) Shukraja *Ashmari*

Acharya Charaka has considered Mutra *Ashmari* as a variety under Mutrakrichhra and classified it into Mriduashmari and Kathina *Ashmari* on the basis of consistency. Shukraja, Pittaja and Kaphaja varieties are the Mridu where as Vataja Variety is Kathina.

Table 3: Classification of Ashmari according to different Acharya's View

S.No.	Ashmari	Su.	Ch.	A.Hr.	A.S.	M.N.	B.P.	Y.R.
1.	<i>Shlehmaja</i>	+	-	+	+	+	+	+
2.	<i>Pittaja</i>	+	-	+	+	+	+	+
3.	<i>Vataja</i>	+	-	+	+	+	+	+
4.	<i>Mridu</i>	-	+	-	-	-	-	-
5.	<i>Kathina</i>	-	+	-	-	-	-	-



FEATURES & LAKSHNAS OF DIFFERENT *ASHMARI*⁶¹

1. **Shleshmaja:** White, slimy, big like Kukkutanda, Colour-Madhuka Pushpavat, Heavy in weight, Heavy and cold sensation in bladder area, Cutting, incising, pricking pain .
2. **Pittaja:** Reddish/Yellowish-black or honey like colour, Resembles Bhallataka seed. Burning, hot sensation and inflammatory changes in urinary tract,
3. **Vataja:** Dusty coloured, Hard, Irregular, Rough, Nodular like Kadambapushpa, Severe bladder pain, umbilical pain and pain in the anus, Frequent passage of flatus, Urethral burning, Dysuria, Difficulty in defecation.
4. **Shukraja:** Dysuria, Scrotal swelling, Lower abdominal pain, and Special characteristic feature are, it can be crushed into powder by pressure.

Correlation of different *Ashmari* with Modern view:

Vataja Ashmari can be co-related with oxalate stones, *Pittaja Ashmari* can be co-related with Uric acid and Urate stone, *Kaphaja Ashmari* can be correlated with Phosphatic stone and *Shukraja Ashmari* can be co-related with Spermolith. Because, their symptoms are related to each others.

Symptoms	Type of <i>Ashmari</i>	Type of calculus
Severe pain, obstruction to flow of urine or intermittent flow of urine, stone- blackish in colour , hard, rough with uneven surface, and thorny like <i>Kadamba</i> flowers.	<i>Vataja Ashmari</i>	Oxalate lime calculus
Obstruction to flow of urine, burning type of pain with haematuria, stone is reddish, yellowish, black in <i>Color</i> and surface is like kernel of marking nut or honey <i>Colored</i> .	<i>Pittaja Ashmari</i>	Uric acid calculus, Urate calculus, Cystine calculus.
Obstruction to the urine flow with mild ache, it is white in <i>Color</i> , unctuous in texture, large in size similar to hen's egg or having <i>Color</i> of <i>Madhuka</i> flower.	<i>Kaphaja Ashmari</i>	Phosphate calculus



SADHY-ASADHYATA:

In our classics, Acharyas have described about 'Ashta Mahagadas' and these Mahagadas are not easy to treat and they are not having good prognosis. As Ashmari is mentioned as one of them, so it requires great attention for its cure. In children because of the smaller space occupying lesion and less fat in subcutaneous and perinephric region the prognosis is better. Similarly early detected Ashmari can be treated with medicines because of its recent origin and small size, while an Ashmari of long time origin is difficult to cure and large Ashmari is also an indication for surgical treatment.^[7] Ashmari associated with complications and Arishta Lakshanas should be avoided.

TREATMENT

'Nidana Parivarjana' is the main method of keeping one self free from the disease. As Ashmari is Kapha predominant diseases, hence the measures aggravating Kapha are to be avoided and the treatment to control Kapha is to be followed. The below said is the treatment of choice in Ashmari viz.^[8]

1. Aushadha Chikitsa

2. Basti Karma Chikitsa

3. Kshara Chikitsa

4. Shastra Chikitsa

1. Aushadha Chikitsa -

Because, Ashmari has been considered a grave disease and said to be as fatal as death. So it is necessary to diagnose and treat the disease at the earliest. Acharya Sushruta has advised to treat this disease in Purvarupa stage itself. He has prescribed following medications depending upon the varieties of Ashmari. Aushadha used by Maharsi Sushruta for different types of Ashmari Vataja: Pasnanabheda, Vasuka (Sweta Arka), Vasir (Gajapippala), Ashmantaka (Changeri), Shatavari, Gokshuru, Brihati, Kantakari,

Kapotavanka (Brahmi), Khasa, Gunja, Shyonaka, Varuna, Yava, Kulatha, Bera, Nirmali. Pittaja: Kasha, Kasha, Ikshumoola, Pasanabheda, Satavari, Vidarikanda, Root of Shali Dhanya, Dhanyaka, Gokshuru, Shyonak, Patala, Patha. Kaphaja: Varunadigana, Guggulu, Elaichi, Kutha, Devdaru, Haridra, Maricha, Chitraka.

2. Basti Karma Chikitsa-

Acharya Sushruta has advised to use Uttarabasti, for the management of bladder stone. The decoction of Kshiri briksha (latex tree), when used as Uttarabasti, it flushes out the calculus and collected blood in bladder immediately. Basti treatment in Ashmari is indicated by all ancient Acharyas.

3. Kshara Chikitsa -

Maharsi Sushruta has described that, the Kshara prepared from the drugs Varunadigana is helps to destroy the Ashmari, Gulma and Sharkara. The Kshara prepared from the Kalka of Tila, Apamarga, Kadali, Palasha and Yava should be used with sheep's urine to destroy urinary gravel. Again he told that, Kshara of Patola and Karavira used in above process also destroys the urinary gravels.

4. Shastra Chikitsa-

Shastra chikitsa is indicated when Ashmari will not cure after treatment with Ghrita, Kshara, Kasaya, milk preparations and Uttara Basti. In this regard, Maharsi Sushruta told that, If Shastra Karma not done, then definitely patient will die. After Shastra karma also, it is doubtful, patient will cure or not.

PATHYAPATHYA Pathya means, the Ahara and Vihara which is always suitable to patient and aids in relief or cure of a disease without developing other diseases. Those Ahara and Vihara, which are causes complications and aggravate the same disease is known as Apathya.



Pathya: Basti, Vamana, Virechana, Langhana, Avagaha sweda are useful in case of Mutrashmari. Dietetic items advocated are: Yava, Kulatha, Puranashali, Mudga, Ginger, Yavakshara and all the Vatanashaka Ahara. Medicines Advocated are: Gokshura, Yavakshara, Varuna, Punarnava and Pashanabheda.

Apathya: Ativyayam (Excessive exercise), suppression of micturition, ejaculation, incompatible constipation and heavy diets. Dietetic items non advocated are: Shushka Ahara, Kapitha, Jamun, dry Dates, Kshaya Ras Sevana etc. ^[9,10]

DISCUSSION & CONCLUSION:

Urological problems form an important part of medical deliberations. In Ayurveda, Kapha Dosha in increased quantity has been accepted as the main reason for the formation of Mutrashmari. Here an effort was made to describe details about this disease both in Ayurvedic as well as modern view and interpreted each other. It helps physician to know about this disease in detail. So that, they can treat successfully to this disease for the benefits of mankind.

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JEERAKADI MODAKA: AN AYURVEDIC REMEDY IN UDAVARTINI YONIVYAPAD (PRIMARY DYSMENORRHEA)

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ABSTRACT

“Painful Menses” is very well nomenclatured as Dysmenorrhoea. In regular practice by gynecology we confront dysmenorrhea as most frequent burning problem almost more than 50% of females suffer with this ailment in their reproductive period. Primary Dysmenorrhea can be harmonized with udavartini Yonivyapad in Ayurveda The basic feature of udavartini is “Rajah Kricchrata” that is severe uterine pain during menstruation.

Although most females experiences minor pain during menses, dysmenorrhoea is diagnosed when the intensity of pain is so severe as to limit normal activities and required medications. According to Ayurvedic literature the clinical characters of udavartini are pain, difficulty expulsion of menstrual blood due to upward movement of rajas propelled by vitiated vata. The upward movement is called as udavartini. The basic aim of our study is to evaluate the efficacy of jeerakadi modaka on primary dysmenorrhea. Thirty two females with complain of dysmenorrhoea were registered for the study. All the thirty two females were assigned into a single group and they were given this conservative medication for three consecutive cycle. For jeerakadi modaka powder of both jeerakas, Krishna, Susavi, Surabhi, Vaca, Vasaka, Saindhava, Yavaksara and Yavanika should be slightly fried in ghrita and after

mixing with sugar rounded balls are made One modaka is of 6 gram and they are advised to take twice daily before food, two weeks prior to the menstruation.

Study has shown more effective result in pain relief based on scrutiny. We can conclude that Jeerakadi modaka is an effective herbal drug for primary dysmenorrhoea.

Key words- Pain, Primary Dysmenorrhoea, Udavartini Yonivyapad, Jeerakadi Modaka.

INTRODUCTION

Women the source of energy and the source of life have the power to nurture life in herself. Commencement of menses indicates the very first sign in a girl's life that she can in future attains motherhood. Each month these cycles normally occurs with an interval of 28-30 days. When these cycles occurs with agony they termed as “Dysmenorrhoea” In Ayurvedic texts they were termed as Udavartini Yonivyapad. Udavartini is vatas nanatmaja disease. Artava is pushed in upward direction by apana vayu due to its obstruction in its normal flow (anuloma gati) in pakwashaya. The chief site of apana vayu is pakwashay.

Dysmenorrhoea is a medical condition of pain during menstruation that interferes with daily activities; it can be classified into two categories-

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a) Primary dysmenorrhoea-It refers to one that is not associated with any identifiable pelvic pathology. It is now clear that the pathogenesis of pain is attributable to a biochemical derangement It affects more than 50% of postpubescent women in the age group of 18-25 years

b) Secondary dysmenorrhoea- It refers to the one associated with the presence of organic pelvic pathology that may be fibroid, adenomyosis, PID, endometriosis etc.

Unilateral dysmenorrhoea occurs in a rudimentary horn of bicornuate uterus. Dysmenorrhoea could also be classified based on three clinical varieties-

a) Spasmodic- It is the most prevalent and manifests as cramping pains, generally more pronounced on first and second day of menses.

b) Congestive- It manifests as increasing pelvic discomfort and pelvic pain a few days before menses begins. Thereafter the patients rapidly experiences relief in her symptoms This variety is commonly seen in PID or pelvic endometriosis and fibroid

c) Membranous- It is a special group in which the endometrium is shed as a cast at the time of menses. The passage of the cast is accompanied by painful uterine cramps.

Primary dysmenorrhoea is quite common more than 70% of teenagers and 30 to 50% of menstruating women suffers from varying degree of discomfort. Its prevalence is higher amongst the more intelligent and sensitive working class women. Both the local and systemic symptoms are apparently the result of increased level of prostaglandins in the menstrual fluid. This results in uterine cramping, nausea, vomiting, backache, diarrhoea, giddiness,

syncope and fainting. Primary dysmenorrhoea occurs in Ovulatory cycles hence it makes its appearance a few years after menarche at least 6 to 12 months of painless menses. It is most intense on the first day of menses and progressively lessens with menstrual flow. It often lessens with passage of time and after childbirth, pelvic findings are normal.

AIM AND OBJECTIVE

In this study oral administration of jeerakadi modaka is advised in case of primary dysmenorrhoea (udavartini). Hence the study is taken up to evaluate the efficacy of jeerakadi modaka described in Bhavaprakash as vedanasthpana, vatahara, anulomana and rasayan properties.

PLAN OF THE STUDY

32 patients were selected from OPD and IPD of Rishikul Government Ayurvedic PG College and Hospital, Haridwar. The plan of study is single blinded and patients with complain of dysmenorrhoea were selected since menarche to menopause.

DRUG

Jeerakadi Modaka has been mentioned in Bhavaprakash is assigned for the study. Its basic ingredients are: swetajeerak (Cumin cyminum), krishnajeeraka (Carum carvi) Pippali (Piper longum), upakunchika (Nigella sativa), rasna (Alpinea galganga), vacha (Acorus calamus), Vassa (Adhathoda vasica), saindhavalavana (Sodium chloride), yavakshara (Hordeum vulgare), yavanika (carum capsicum), Ghrita and Guda

All the drugs were taken in equal quantity and performed bharjana with ghrita and mixed in the madhyama paka of jaggery. The same is prepared as round balls of approximately 6 grams .It is given orally two weeks prior to menses twice in a day.

Anupana- Luke warm water (sukhoshna jala)



CRITERIA

- a) Inclusion criteria-** All patients suffering from primary dysmenorrhoea with age group since menarche to menopause.
- b) Exclusion criteria-** Patients suffering from secondary dysmenorrhoea, and also patients with systemic diseases benign and malignant growth etc.
- c) Assessment Criteria-** The results can be evaluated in terms of relief in pain; as pain is categorized as- mild, moderate and severe. Results or outcome, can be assessed in terms of following:
- Complete relieved- 75 to 100 % of symptoms relieved.
 - Partially relieved-25 to 75% of symptoms relieved.
 - No relief- 0 to 25% of symptoms relieved.

SURVEILLANCE AND INTERPRETATION

32 patients with udavartini yonivyapad were selected randomly from the OPD and IPD of Rishikul Govt. Ayurvedic Hospital as per the inclusion and exclusion criteria. The drug Jeerakadi modaka was given for three consecutive cycles.

AGE	Number of Unmarried Patients	Number of Married Patients
13-16	2	0
17-20	8	7
21-24	4	0
25-28	4	5
29-32	0	2

Table 1: The incidence of udavartini yonivyapad based on age and marital status

Parity	Nulliparous	Parous
Number of Patients	22	10

Table 2: The Incidence of udavartini yonivyapad based on parity.

Prakriti	No. of Patients
Vataja	5
Pittaja	8
Kaphaja	9
Vata Pittaja	8
Vata Kaphaja	3
Kapha Pittaja	2
Sama	2

Table 3: The Incidence of udavartini yonivyapada based on Prakriti.

Intensity of agony -

Intensity of pain is different in each individual and depends on their sattva also. As we have earlier classified the pain as mild, moderate and severe

- Mild- If Patients simply complains the pain
- Moderate-If the pain hampers her daily routine work
- Severe- If the pain subsided only by taking analgesics

Intensity	Mild	Moderate	Severe
Number of Patients	4	16	12

Table 4: Number of patients vs. Intensity of pain.

The basic symptoms in dysmenorrhoea includes the lower abdominal pain, which radiates to the back



and thighs associated symptoms may include nausea, vomiting, headache, constipation etc

Age	No. of patients	Unmarried patients Fully Relieved	Unmarried Patient having Partial Relief.	Unmarried Patients with no Relief.
13-16	2	1	1	0
17-20	8	6	1	1
21-24	4	2	1	1
25-28	4	1	1	2
29-32	0	0	0	0

Table 5: Outcome for Un-Married patients.

Age	No. of patients	Married patients Fully Relieved	Married Patient having Partial Relief.	Married Patients with no Relief.
13-16	0	0	0	0
17-20	0	0	0	0
21-24	7	5	1	1
25-28	5	4	1	0
29-32	2	2	0	0

Table 6: Outcome for Married Patients.

Complain	No. of patients	Fully relieved	Partially relieved	Not at-all relief
Pain Abdomen	32	26	4	2
Backache	28	24	4	8
Vomiting	16	14	1	1
Constipation	16	12	0	0

Table 7: Outcome based on chief complains.

Parameter of relief	Number of Patients	Percentage (%)
Complete	10+11=21	65.62
Partial	4+2=6	18.75
Not any	4+1=5	15

Table 8: Final Result

DISCUSSION

In Udavartini yonivyapada the raja is pushed upward by vitiated apana vayu. Due to the movement of vata in upward direction the yoni initially throws the artava above and then discharges it with difficulty. Beside the painful and frothy menses there are varying degree of pains of vata (Bodyache, General Malaise etc.) The present drug jeerakadi modaka has the property of vedanasthapana, vatahara, anulomana and rasayan It helps in relieving the obstruction of the passage, relieves spasm and facilitates free movement of vata; which further makes free flow of menses. Although in many cases the pain during menses get subside after child birth as it may improves the vascularity and growth of utrine muscles. The disease is more in vataja and vata predominant pitta prakriti. Symptoms with pain in abdomen are seen in all 32 patients in which 81% get fully relieved. Low backache is seen in 81% of cases among them 75% get relieved completely. 50% women complain of nausea and vomiting among them 43% gets relieved. 37% women complain constipation among them all get relieved.

CONCLUSION

It can be concluded that the trial drug jeerakadi modaka is highly effective in udavartini yonivyapad (primary dysmenorrhoea.) There is no such side effect is noticed during research trial, Partially



relieved or no relieved cases may require longer duration of medication.

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“ROLE OF SUKHAVATI VARTI (LEKHYA ANJANA) IN THE PREVENTION OF RECURRENCE OF ARMA (PTERYGIUM) AFTER ARMA CHHEDANA (PTERYGECTOMY)”

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Abstract-

Among the seventy six diseases of *Netra*, *Arma* is the disease of *Shukla Mandala* (white part). This is the most common eye ailment since ancient times. The detailed description about the disease and its treatment in ancient literature shows that in those times too, the disease was present in the same manner as it is found today. The progressive nature of the disease has always attracted the Ophthalmologists for its treatment, but no satisfactory treatment is still available. Our Aacharyas were also well aware of the nature of its recurrence that's why they have advocated the use to *Lekhya Anjana* for the remnants of *Arma*. The *Lekhana* property of these *Anjanas* scrap out the remnants. Keeping all above facts in mind about the treatment of *Arma* (Pterygium), *Ayurvedic* mode of combating the *Arma-shesha* with *Lekhya Anjana* was thought of. So ***Sukhavati Varti, a Lekhya Anjana*** was taken as the drug of choice for checking the recurrence of *Pterygium* after its excision as it is hypothesised that the *Lekhana karam* of *Varti* will scrap out the *Arma-shesha* if any, thus checking its recurrence. 30 patients were selected in two groups. Standard group was treated without *Sukhavati Vart* and Treated group was treated with *Sukhavati Varti*. *Sukhavati Varti* affects the recurrence of *Arma* to some extent. The congestion at the wound site, keratitis, itching, foreign body sensation and watering were relieved more early in

the Trial group patients. Results have been discussed in forth coming pages.

Keywords-*Arma, Sukhavati Varti, Pterygium, Lekhya Anjana*

Introduction

Sushruta Samhita dealt beautifully and vividly with eyes with respect to its anatomy, physiology and diseases with their vivid classification and description. *Shalaky Tantra* included Otorhinolaryngiology, Dentistry and diseases of Cranial vault especially headache in addition to Ophthalmology. Among the seventy six diseases of *Netra* (*Eye*), *Arma* (*Pteygium*) is the disease of *Shukla Mandala* (white part). This is the most common eye ailment since ancient times. It is one of the common ocular surface occupying degenerative disorders, characterized by fleshy encroachment from inner and outer canthii towards the cornea.

As the disease *Arma* presents itself with symptoms of itching, watering or congestion only, the patients do not turn up for its treatment initially. When the growth reaches the pupil, thus hampering vision or disturbing the patients cosmetically, then only patients go for its treatment. But then surgery is the only option left. Therefore *Chhedana i.e*

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excision of *Arma* (*Pterygium*) is the treatment described in our ancient texts. In Modern Ophthalmology, various surgical techniques have been advised for its excision.

But recurrence of *Pterygium* after excision is such a great problem that there is a saying “*Pterygium* is a sleeping tiger, do not disturb it, otherwise effects can be displeasing.”

Our Acharyas were also well aware of the nature of its recurrence that’s why they have advocated the use to *Lekhya Anjana* (*Collyrium*) for the remnants of *Arma*¹. The *Lekhana* property of these *Anjanas* scrap out the remnants. The constituents of these *Anjanas* have got *Katu*, *Tikta*, *Kashaya*, *Laghu* and *Ruksha* properties. **Sukhavati vart**² also possesses same properties and is prescribed to scrap out the remnants of *Arma*.

In Modern Ophthalmology, Radiational therapy or Antimitotics are used to prevent the recurrence of *Pterygium* after excision³. These therapies are quite costly and in a developing country like India, maximum patients cannot afford the same or will not like to spend as the *Pterygium* is not such an agonizing or dreadful disease.

Keeping all above facts in mind about the treatment of *Arma* (*Pterygium*), *Ayurvedic mode of combating the Arma-shesha with Lekhya Anjana was thought of*. Moreover our *Ayurvedic* preparations are easily available to common man. Every man can use them due to their lesser price.

So *Sukhavati Varti*, a *Lekhya Anjana* was taken the drug of choice for checking the recurrence of *Pterygium* after its excision as it is hypothesised that the *Lekhana karema* of *Varti* will scrap out the *Arma-shesha* if any, thus checking its recurrence.

Aims and objectives-

1. To see the effect of *Sukhavati Varti* on recurrence of *Pterygium*.

2. To see the side effects/toxic effects of the drug.

Material and Methods-

The whole study was divided into:

- A. Conceptual study
- B. Clinical study

A. Conceptual study:

Detailed review of *Ayurvedic* and modern literature was carried out to know about disease entity and treatment.

B. Clinical study:

1. Selection of Patients: The study was conducted on the patients of *Netraroga O.P.D. of Shalaky Tantra of Rajiv Gandhi Govt. Ayurvedic Hospital, Paprola*. The patients were selected for the trial, irrespective of caste, creed, race and religion.

2. Criteria of Diagnosis: Diagnosis was done on the basis of features described in *Ayurvedic* literature and Modern texts e.g. Clinical Ophthalmology by Jack J. Kanski and Text book of Ophthalmology by Dr. A. K. Khurana.

3. Inclusion criteria:

- a. Patients willing for trial.
- b. Patients, who were diagnosed in OPD as suffering from *Arma* having no other local or any major systemic disease, were included in the trial.
- c. The *Arma*, which has crossed *Shweta-Krishanagata Sandhi* (limbus) and encroached cornea, was included in the study.

4. Exclusion criteria:

- a. Patients not willing for trial.
- b. The patients who were having ocular diseases of anterior segment such as conjunctivitis, keratitis, keratoconjunctivitis etc.
- c. Patients suffering from major systemic diseases like diabetes, hypertension etc.



- d. Patients with recurred Pterygia after Pterygectomy were also excluded from the study.

4. Investigation criteria:

For ruling out the pathologies, following investigations were performed in all selected patients:

- ❖ Fasting blood sugar
- ❖ Bleeding Time
- ❖ Coagulation time

5. Methods of study:

All patients selected for trial were explained the nature of study and their written consent was obtained on the Proforma before inclusion in the study.

Thirty patients were selected for present study who were fulfilling the criteria of diagnosis and had given their consent for study.

After arriving at diagnosis, Clinical Proforma was filled up which incorporated all the signs and symptoms based on both ancient and modern literature. All points of *Dosha, Dushya etc.* was also included in the Proforma. Complete physical, local and systemic examination was carried out with specific investigations in all patients.

7. Division of Groups:

Patients were randomly divided into two groups:

- a. Standard Group
- b. Treated Group

a. Standard Group :

Surgical excision was carried out without the application of *Sukhavati Varti*, but antibiotic with steroid eye drops along with anti-inflammatory drugs were also given in post operative care.

- ❖ Here the Antibiotic Eye drops with steroid preparations was :
 - Amoflox- D (Ofloxacin with Dexameth as one) for 5 days.
- ❖ Anti-inflammatory drug was:
 - Nimesulide with paracetamol x 5 days

b. Treated group:

Surgical excision was followed by application of *Sukhavati Varti* for 2 minutes. *Varti* was applied after rubbing on aseptic surface just after the procedure, afterwards it was applied in the form of drops twice daily for two weeks.

Drops were formed by mixing fine autoclaved powder of *Sukhavati Varti* in *Eye Drop Tear Plus* and were instilled twice daily. *Drop Tear Plus* contains Polyvinyl alcohol, Povidone, Chlorbutol. The quantity of powder of *Sukhavati Varti* was 500 mg in 10 ml of Tear Plus Eye drop. In addition to trial drug some antibiotics and anti-inflammatory drugs were given to the patients.

Technique of surgery adopted for Pterygium excision was "*Bare Sclera Technique*". However routine post operative care was followed in both the group at specific time.

8. Duration of time:

Though the duration of trial was two weeks but the patients were called upon for follow up after *one, two and three months* to see recurrence and complications after surgery.

9. Criteria for Assessment:

Though, the Recurrence and Non recurrence of *Arma*, was the sole criteria for assessment of therapy, the study is aimed to see the recurrence in standard and treated groups. But the effect of treatment (results) was assessed with regard to clinical signs and symptoms (on the basis of scoring and grading system) and to cover all improvements, an inter group comparison was also done.

- ❖ Recurrence of *Arma* is given grade - 1
- ❖ Non recurrence of *Arma* - 0

Clinical assessment

a. Itching (*Kandu*):

- ❖ No *kandu* - 0
- ❖ Occasional *kandu* on exposure to sunlight - 1
- ❖ Continuous *Kandu* - 2



- b. Watering(Ashru srava – Muhurmuhu srava):**
- ❖ No *Srava* – 0
 - ❖ Occasional *srava* (On exposure to sunlight), not affecting routine work – 1
 - ❖ Continuous *Srava* affecting routine work – 2
- c. Foreign body sensation :**
- ❖ No F.B. Sensation – 0
 - ❖ Occasional F.B.Sensation – 1
 - ❖ Intermittent Sensation – 2
 - ❖ Continuous F.B.sensation – 3
- d. Congestion (of Bulbar conjunctiva):**
- ❖ No congestion – 0
 - ❖ Muddy colour of Bulbar conjunctiva – 1
 - ❖ Conjunctival congestion in palpebral aperture . – 2
 - ❖ Conjunctival congestion in whole of bulbar conjunctiva – 3
- d. Keratitis:**
- ❖ No keratitis – 0
 - ❖ Mild keratitis affecting epithelium with no hampering of Vision – 1
 - ❖ Moderate keratitis affecting Bowman's membrane with Hampering of vision – 2
 - ❖ Severe keratitis affecting stroma – 3
- e. Recurrence:**
- ❖ Normal appearance at the operative site – 0
 - ❖ Fine episcleral vessels at the site, extending to limbus – 1
 - ❖ Fibrous tissue on the site of excision – 2
 - ❖ Actual recurrence on the cornea – 3

Overall assessment of therapy:-

The patients in whom recurrence of *Arma* did not occur were considered cured and where recurrence occurred were considered uncured.

Observations

Total 30 patients were registered. Among them, 15 patients were registered in the **Standard Group** and 15 patients in the **Treated (Trial) Group**.

Observations made on all the 30 patients are described here.

Demographic Profile

Maximum No. of patients were of age group 25-50 years (70%), females 60% (40% were males), married 93.33%, Hindu 86.67%, resident of rural area 100%, farmers 46.67%, belonged to middle class 50%, and 66.67% were of mixed dietary habits. 60% patients gave no family history of *Arma*. Majority of the patients had *pitta kaphaja prakriti* 46.67% with *Avara dehabala* 43.33% and *TikshanJathragni* 40% with *krsar koshttha* i.e. 46.67%. Majority of the patients were having no addiction 50%.

Clinical Profile

In the present study, maximum patients i.e. 40% of patients were having onset of pterygium within 0-1 years, 60% patients were having progressive type of *Arma*, all the patients were suffering from primary pterygium i.e. 100% .

According to *Aacharya Sushruta* maximum patients were having *Prastari* type *Arma*, which is of progressive in nature i.e. 33.33%, 53.34% patients were having *Arma* in right eye, maximum pterygium were of grade-II i.e. 43.34%,

Maximum Patients showed symptom of foreign body sensation i.e. 26.67%, 23.33% showed symptom of itching and 20% showed symptom of watering. In 16.67% of patients these three symptoms were present altogether and 4% of patients showed no symptoms.

Results

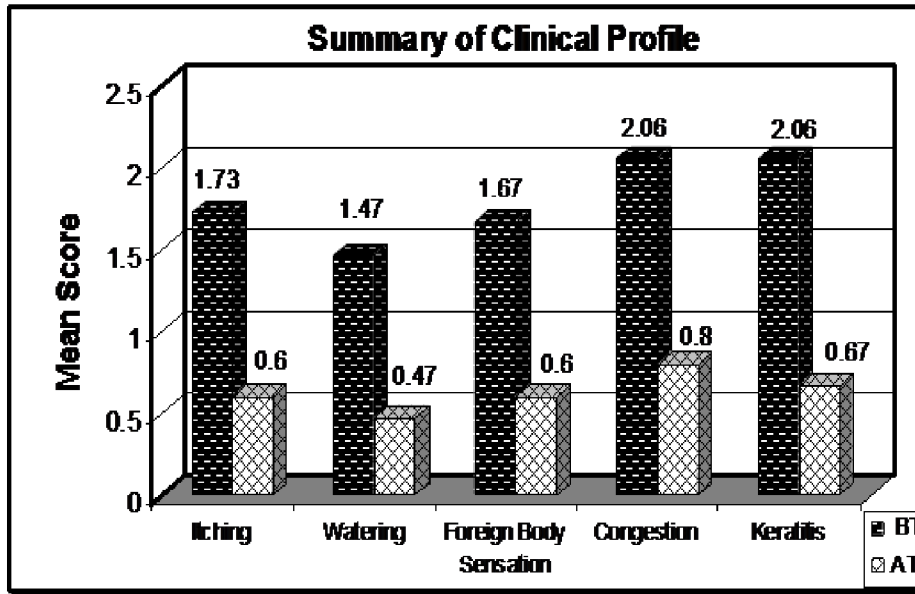
Effect of therapy in Standard group -

In itching, the percentage of relief was 65.31%, in watering 68.02%, in F. body 64.07% relief was observed, which were statistically highly significant($p<0.001$).

On looking the signs, congestion was relieved in 61.16% and keratitis was relived in 67.48%, which were also statistically highly significant($p<0.001$).



S. Number	Mean Value		relief	%age	SD	SE+	't'	p
	BT	AT						
Itching	1.73	0.60	1.13	65.31	0.36	0.10	12.05	<0.001
Watering	1.47	0.47	1.00	68.02	0.37	0.10	10.46	<0.001
FB Sensation	1.67	0.60	1.07	64.07	0.79	0.20	5.24	<0.001
<i>Signs:</i>								
Congestion	2.06	0.80	1.26	61.16	0.70	0.18	7.02	<0.001
Keratitis	2.06	0.67	1.39	67.48	0.51	0.13	10.62	<0.001



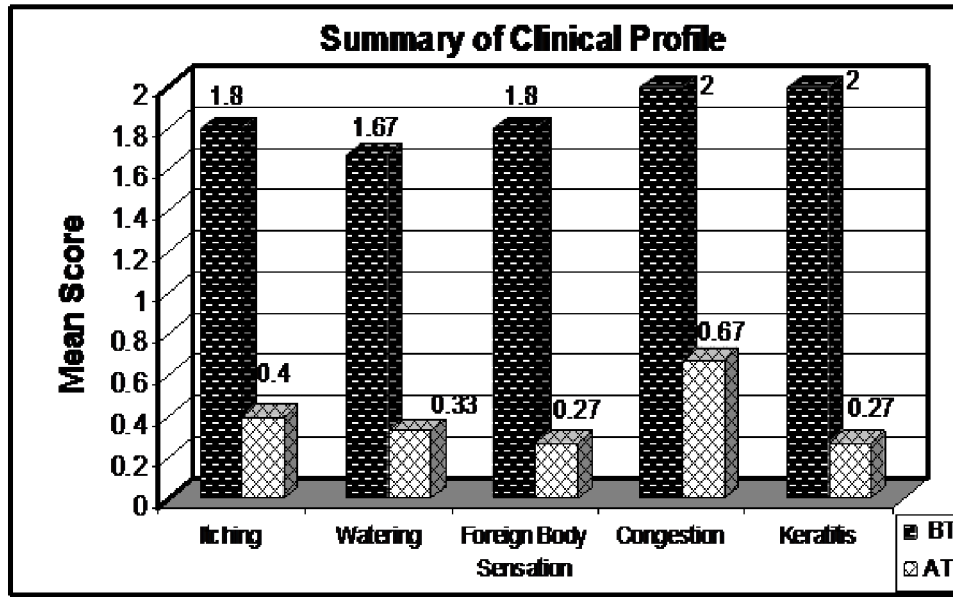
Effect of therapy in Treated group-

In itching, the percentage of relief was 77.78%, in watering 80.23%, in F. body 85.0% relief was observed, which were statistically highly significant ($p < 0.001$).

On looking the sign, congestion was relieved in 66.50% and keratitis was relieved in 86.50%, which were also statistically highly significant ($p < 0.001$).



S. Number	Mean	Value	relief	% age	SD	SE+	't'	p
	BT	AT						
Itching	1.8	0.4	1.4	77.78	0.51	0.13	10.62	<0.001
Watering	1.67	0.33	1.34	80.23	0.63	0.16	8.25	<0.001
FB Sensation	1.80	0.27	1.53	85.00	0.96	0.26	5.98	<0.001
Signs								
Congestion	2.00	0.67	1.33	66.50	0.50	0.13	10.30	<0.001
Keratitis	2.00	0.27	1.73	86.50	0.41	0.11	16.87	<0.001



Recurrence

- ❖ Recurrence rate in Standard group : 20%
- ❖ Recurrence rate in Treated group : 6.67%



Discussion

During the present study it was observed that most of the patients were from age group 25-50 yrs. The data shows that Pterygium is more prevalent after two decades of life. In this age group, people are actively engaged in outdoor activities and people become more apprehensive of their problem due to cosmetic disfigurement and visual disturbance, if any caused by progression. Majority of the patients were females. Though texts show more prevalence of disease in males doing out-door work, but in this study, females form the majority. This is attributed to the cause that females of this area do outdoor work actively in the form of farming, so are exposed to UV rays, smoke, dust etc. leading to development of Pterygium. Most of patients were of Hindu religion. This is due to predominance of Hindu community in this area. Majority of patients were farmers. Data shows the prevalence of Pterygium in the persons doing outdoor work which is in accordance with textual references too. Majority of patients were from middle economical class. This was due to the fact that the study was conducted in a Govt. hospital, situated in a rural area where majority of population is of middle class society. 40% patients were having family history of Pterygium. This factor coincides with textual reference that hereditary factors may play a role in the development of Pterygium.

Majority of patients of the study were having onset of Pterygium within one year, This signifies that the disease is chronic in nature. Maximum number of patients of the clinical trial was suffering from Progressive type of pterygium which had occurred within one year, this shows that progressiveness has no relation with chronicity, though progressiveness can decrease due to age factor. Maximum patients having progressive type of pterygium were from age group of 25-60 yrs. Though nothing can be said to be proven by these studies but we can say that the progressive type of pterygia

occur in middle age groups and in older age group, this progressiveness stops and pterygia become stationary. The evaluation of chronicity in relation to progressiveness was studied in the present study, which showed that the progressive type of pterygium was less than one year chronic in nature. Patients having pterygium with history of less than 2 years were having pterygium which had become stationary their percentage being 13.33%. As already mentioned progressiveness is related to age, not to chronicity. *In all patients*, Pterygium was present on nasal side which may be due to the fact that :-

- ❖ Conjunctiva is loose in inner canthus, which causes more friction during lid movements and causes degeneration at that site.
- ❖ All the discharges due to any reason are always collected in inner canthus, which may cause conjunctival/subconjunctival degeneration.
- ❖ The aperture of palpebral fissure in medial canthus is wider than lateral one, it makes the area more susceptible for exposure conjunctivitis and medial marginal keratitis.
- ❖ It is also postulated that UV rays after reflection from nasal bridge strike more at inner side of palpebral aperture, so nasal pterygia are more common.

In the present study maximum patients were having pterygium of grade-II. An idea about the progressiveness of the pterygium can be assessed. More the grading, more vascular the pterygium, so more are the chances of its recurrence.

Summary and Conclusion

This conceptual and clinical study made on “*Role of Sukhavati Varti (Lekhya Anjana)* in the prevention of Recurrence of *Arma (Pterygium) after Arma Chhedana (Pterygectomy)*” leads to following conclusion :



1. The incidence of *Arma* increases with increase in age. Pterygium regresses with old age and progressiveness of *Arma* has no relation with chronicity of disease.
2. The trial drug *Sukhavati Varti*, as advised by ancient *Acharyas*, is no doubt an effective treatment modality in checking the recurrence.
3. *Sukhavati Varti* affects the recurrence of *Arma* to some extent.
4. The congestion at the wound site, keratitis, itching, foreign body sensation and watering were relieved more early in the Trial group patients.
5. No adverse and toxic effects were observed during and after the treatment.
6. The study should be carried out on a large scale so that satisfactory results are gained.

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COSMETOLOGY IN AYURVEDA

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Abstract

Ayurveda is considered as ancient science of health & medicine including cosmetic aspects. Beauty is the desire of every individual to give pleasure to the sense. The concept of beauty & cosmetics is as old as mankind & civilization. Safe solutions, no side effects, use of natural herbs, long lasting impacts etc. have made *Ayurveda* as choicest cosmetology. Cosmetology is the science of alternation of appearance & modification of beauty. According to drug's & cosmetic act (India) 1940 cosmetics be defined as any substances intended to be rubbed, poured, sprinkled or otherwise applied to human being for cleansing, beautifying promoting attractiveness. *Charaka samhita* classified cosmetics drugs as *Varnya, Vayasthapak etc. Many alepa, pradeha, upnaha, anjana, oils are described in Sushruta Samhita & Astanga Hridaya*. The very common medicines as *dasnga lepan, chandanadi lepan, kumkummadi taila, dasana samskar churna* etc. are very well established medicines in ayurveda. According to ayurveda a number of factors determine skin health and youthfulness. These include proper moisture balance (*Kapha* in balance), effective functioning of the metabolic mechanisms that coordinate various chemical and hormonal reactions of the skin (*pitta*) and efficient circulation of blood and nutrients to the different layers of the skin (*vata*). The health of *dhatu*s (mainly three) is pecially

reflected in the skin *rasa, rakta* and *mamsa*. *Rasa* supports all the body tissues, particularly keeping the skin healthy, *rakta*, in association with liver function, helps to detoxify the skin of toxins, while *mamsa* provides firmness to the skin. An effective *Ayurvedic* anti ageing cosmeceutical should provide support to all these three areas. *Snehana* and *Swedana* bring moisture to our skin. It gives our skin greater elasticity and rejuvenates skin tissues. For *vata* skin to stay youthful, skin care products that can nourish and rehydrate the skin should be used, otherwise it may be susceptible to wrinkles and premature aging. Warm oil self-massage and all natural moisturizers may help. For *pitta* skin, good sunscreens for protection from the sun, and good facial skin oils should be used daily. Tanning treatments and therapies that expose delicate sensitive skin for extended periods of time to steam/heat should be avoided. For *kapha* skin, a daily warm oil massage and cleansing of skin with gentle exfoliants should be performed. *Ayurveda* is a vast world of herbs and medicine, hence one has to do deep study of different herbs used in cosmetics, need to understand the medicinal properties of herbs to cure skin ailments need to understand *Rasayana* and cosmetics in order to be expert *Ayurvedic* cosmetologist.

Key words : Cosmetics, Beauty, Ayurveda

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Introduction

Cosmetology is the science of alternation of appearance and modification of beauty. Any substance or preparation intended to be placed in contact with the various external parts of human body (epidermis, hair, nails, lips, and external genitals) or with the teeth and mucous membrane of oral cavity with a view exclusively or mainly to cleaning them, changing their appearance and/or correcting body odors and /or protecting them or keeping them in good conditions. ¹ The cosmetics in general are external preparation and are meant to be applied to external part of the body. In other word they may be applied to skin hair , nails and teeth etc. for the purpose of beautification, protection or to cure the diseases of the exposed surface of the body.² *Ayurveda* emphasizes on external and internal beauty. It is believed in *Ayurveda* that one can enhance internal beauty by understanding and following the basic principle of *Ayurveda*. Diet and lifestyle are two things that help achieve good health and beauty. As *Ayurveda* relates to every aspect of the mind, body and the soul, it considers beauty as an intimate part of the human personality. To serve the purpose of fast natural beauty a faster and deeper cleansing and re-balancing is accomplished by using *Ayurveda's* traditional rejuvenation therapy. The rejuvenation therapy in *Ayurveda* teaches ways to become naturally beautiful, which is not just limited to the physical body but extends to subtle qualities and vitality of a person. Hence, rejuvenation therapy is regarded as an integral part of ongoing self-care that helps beauty be with you throughout life and a fresh start in the process of making health-supporting lifestyle changes.

Consumer trends suggest a gradual shift from chemical-based products to *Ayurvedic* beauty products. Growing concern over side effects of chemical-based products is the main reason behind this trend. The *Ayurvedic* natural cosmetics business of India is growing at the rate of 15-20% per year-

much higher than India's overall cosmetics business that has a growth rate of 7-8%. ³ Now -a-days in the whole world there is turn to return towards the use of herbal products and to adopt more natural way of life. The usage of herbal cosmetics has been increased to many folds in the personal care system and there is a great demand for herbal cosmetics. All this happened due to the excessive use of synthetic based products , synthetic chemicals, chemical dyes. Their production and usage cause human health hazard with several side effects leading to numerous diseases. It also caused considerable environmental pollution and disturbed our eco-system. The beauty of skin and hair basically depends on individual's health, diet, habits, climatic conditions and maintenance. In summer, excessive heat exposure dehydrates the skin and increases melanin content. It causes wrinkles , blemishes, sun burns and pigmentation. Extreme cold in winters also damage skin cracks and cuts are generally observed. Similar problems occur with hair as hair fall and their graying at early age becomes a general feature.⁴ *Ayurveda* is one of the most ancient medical traditions practiced in India, Sri Lanka and other South Asian countries, and has a sound philosophical and experiential basis.⁵ *Atharvaveda*, *Charaka Samhita*.⁶ and *Sushruta Samhita* are its main classics, giving detailed descriptions of over 700 herbs. *Ayurveda* has several formulations for management of ageing and related conditions. Its literature describes over 200 herbs, minerals and fats to maintain and enhance the health and beauty of the skin.⁷ Today there is once again a revival of preference for natural products, and in recent years there has been a great upsurge in the study of Indian herbs.⁸

Aims and objective:

To investigate the cosmetological aspects in *Ayurveda*.



Concept of Beauty in Ayurveda

Ayurveda determined beauty by *Prakriti* (Body constitution), *Sara* (structural predominance), *Sanhanan* (compactness of body), *Twak* (skin completion), *Praman* (measurement) and *Dirghayu lakshyana* (symptom of long life). *Ayurveda* cosmetology started from mother wombs, *dinacharya*, *ratricharya*, *ritucharya* with the practice of medicinal herbs and minerals. According to *Ayurveda* human body functions through various channel systems called “*srotamsi*”, containing both microscopic and macroscopic structures such as the respiratory system, lymphatic/ circulatory system, reproductive system and nervous systems, among others. These channels function as innumerable psycho-biological processes such as enzyme production, neuro-transmitter secretion, hormonal intelligence, respiratory capacity and digestive assimilation/ elimination, immune power etc and responsible for wellness and beauty. These act rhythmically and in concert with one another to perform complex decision-making regarding the supply of nutrients, filtration of toxins, excretion of wastes and much more. If these waste materials are insufficiently metabolized, toxins or incompletely processed foods and experiences can become deposited in weak areas of the body. If unaddressed, these can become a disease. Water is a major component for keeping skin in good condition. Water originates in the deeper epidermal layers and moves upward to hydrate cells in the stratum corneum in the skin, eventually being lost to evaporation. *Snehana* and *Swedana* bring moisture to our skin. It gives our skin greater elasticity and rejuvenates skin tissues.⁹

Ayurveda medicines as Cosmetics

Charaka samhita classified cosmetics drugs as *Varnya*, *Kusthaghna*, *Kandughna*, *Vayasthapak*, *Udarda prashamana*, etc. Many *Alepam* (poultice) *pradeha*, *upnaha*, *anjana* oil are described in *Susruta*

Samhita and *Astanga hridaya* in the context of *twak roga*. The very common medicine are- *Kungkumadi lepam*, *Dasnga lepam*, *Chandanadi lepam*, *Dasana samskar churna*, *Kukummadi taila*, *Nilibhringaraj taila*, *Himasagar taila*, etc. are very well established medicine in *Ayurveda*. Sesame Oil is used as a base in many oil in *Ayurveda*. It contains lignan compounds called sesamin and sesamol, which are biologically active. These compounds enhance oxidative stability of the oil. They have potential to be used as anti oxidant compounds as well as having a moisturising effect. Buttermilk and goat's milk powders traditionally used in Indian face mask preparations have soothing and emollient properties. They also contain vitamin A, B6, B12 and E. They would make beneficial alternatives to chemical bases and emollients. *Shikakai* is a traditional herb used in hair shampoos. The material is extracted from the *Shikakai* pods and *Shikakai* nuts of the *Acacia concinna* shrub. The pods are rich in saponins and make a mild detergent, which has a neutral pH. *Aritha* powder, extracted from Soapnuts (*Sapindus pericarp*) also contains Saponins, which acts as a foaming agent. It was used as soap in *Ayurvedic* tradition. The oils also maintain integrity of cosmetic products and could be used as a base instead of petroleum and plastic derivatives. There are significant evidences already generated for *Ayurveda* skin care in vitiligo, psoriasis, eczema and acne vulgaris¹⁰.

The *Ayurvedic* cosmetics may group under.^{10,11}

1. Cosmetics for enhancing the appearance of facial skin
2. Cosmetics for hair growth and care
3. Cosmetics for skin care, especially in teenagers (acne, pimples and sustaining)
4. Shampoos, soaps, powders and perfumery, etc.
5. Miscellaneous products.



List of medicinal plants listed in *Ayurveda* for proven cosmoceutical (Table).

A. Medicinal Plants used as Moisturizers, Skin Tonics & Anti-Aging-

1. <i>Aloe vera</i>	Moisturizer, Sunscreen & Emollient
2. <i>Curcuma longa</i>	Antiseptic, Antibacterial, Improves complexion
3. <i>Glycyrrhiza glabra</i>	Skin whitening
4. <i>Ocimum sanctum</i>	Anti-aging, Antibacterial & Antiseptic
5. <i>Triticum sativum</i>	Antioxidant, Skin nourisher, anti-wrinkle

B. Sun Tan

1. <i>Cyperus rotundus</i>	Sun tanning
2. <i>Moringa oliefera</i>	Sun tanning

C. Astringent

1. <i>Mesua ferrea</i>	Strong Astringent
2. <i>Pistacia Integerrim</i>	Astringent, Rubefacient, Anti-bacterial
3. <i>Terminalia chebula</i>	Astringent, Anti-bacterial, Antifungal & Antiseptic

D. Ayurvedic Ingredients for Dental Care Product Uses

1. <i>Azadirachta indica</i>	Toothache, Anti-bacterial, Dental carries
2. <i>Acacia Arabica</i>	Swelling, Bleeding gums & Syphilitic infections
3. <i>Barleria prionitis</i>	Toothache, Bleeding gums & strengthens teeth
4. <i>Mimosops Elengi</i>	Astringent, keep gums healthy
5. <i>Salvadora persica</i>	Potent Antimicrobial
6. <i>Syzygium aromaticum</i>	Local anesthetic, relieves toothache

E. Dermatological Applications

1. <i>Allium sativum</i>	Antifungal, Antiseptic, Tonic
2. <i>Azadirachta indica</i>	Potent Antibacterial
3. <i>Celastrus paniculata</i>	Wounds healing, Eczema
4. <i>Nigella sativa</i>	Antibacterial, Leucoderma
5. <i>Pongamia glabra</i>	Herpes, Scabies, Leucoderma
6. <i>Psoralea corylifolia</i>	Leucoderma, Leprosy, Psoriasis & Inflammation



F. Ingredients for Hair Care Product Uses

1. Acacia concinna	Natural Detergent & Anti-dandruff
2. Azadirachta indica	Reduces hair loss, Anti-dandruff
3. Bacopa monnieri	Hair tonic, Promotes hair growth
4. Eclipta alba	Reduces premature graying of hair, Alopecia
5. Emblica officinalis	Toner, Anti-dandruff, Protects & reduces hair loss
6. Hibiscus rosa sinensis	Natural Hair dye, Prevent hair fall, Antidandruff
7. Hedychium spicatum	Promotes hair growth
8. Lawsonia alba	Natural Hair dye, Anti-dandruff, Conditioner
9. Sapindus trifoliatus	Natural detergent & Cleanser
10. Sesamum indicum	Promotes hair growth, Blackens the hair

Cosmetics in Ayurveda

Ayurvedic cosmetics are in use and practiced since thousands of year in India, without any side effect and are well proven and documented. The analysis of many herbal ingredient using modern scientific technologies has led to the identification of phytochemical components in Indian herbs, which deliver functional benefits as anti dandruff, deodorant, age-defying properties etc.¹²

Skin care through Ayurveda

According to Ayurveda healthy skin is a result of overall health condition of individuals and prescribes numerous skin care treatment that needs to be pursued at every stage of life. The function of Ayurvedic herbs is to purify skin & eliminate vitiated Tridoshas (Vitiated Humor) from the body as they are mainly responsible for skin disorders & other diseases. Several herbs have been mentioned in Ayurveda which can be used to obtain healthy skin and glowing complexion. Specific measurement for the enhancement of different aspect of beauty and disease conditions in relation to skin are mentioned in ancient Ayurvedic texts, they are described in brief.

Charaka Samhita- In context of skin disorder Charaka described about 18 type of *kustha* (obstinate skindisease including leprosy) which included

Vipadika (rhagdes), *Dadru* (ringworm), *Pama* (scabies) etc. in *Chikitsa Sthan* and also in *Nidan sthan*.¹³ Apart from this there are references of tendrug as *Varnya* (complexion promoting)-in *Sutrasthan* viz. *Chandana* (*Santalum album*), *Punnaga* (*Calophylluminophyllum*), *Padmaka* (*Prunucerasoides*), *Useer* (*Vetiveriazizanioides*), *Madhuka* (*Glycyrrhiza glabra*), *Manjistha* (*Rubia cordifolia*), *Sariva* (*Hamidesmus indicus*), *Paysy* (*Ipomoea digitata*), *Sita* (white variety of *Cynodon dactylon*), *Lata* (black variety of *C. dactylon*).¹⁴

Sushruta Samhita- In the *Kshudra roga chikitsa* (treatment of minor disease) many of the skin care treatments are documented.¹⁵

Astang Hridayam- There are three type of *Mukhlepa* (formulation applied on face) viz. for removal of *dosha*, for removal of poison and *varnyakara* (complexion promoting). Mode of application of paste over face, duration and precaution were also elaborately mentioned. Furthermore application of paste varies according to the season¹⁶.

Hemant- (Dewy season)-Paste of seed of *Ber* (*Ziziphus jujuba*), *Vasaka root* (*Adhatoda vasica*), *Savara Lodhra* (*Symplocos racemosa* or *paniculata*) *Sarsapa* (*Brassica campestris*) were applied.



Shisir- (Winter)- *Kateri* root (*Solanum surattense*), *blacktil* (*Sesamum indicum*), bark of *Daruhaldi* (*Berberis aristata*), *Barly* (*Hordeum vulgare*) without husk .

Basant-(Spring)-Paste of root of *Dabh* (*Imperata cylindrica*), *Chandan* (*Santalum album*), *Khas* (*Vetiveria zizanioidis*), *Shiris* (*Albizzia lebeck*), *Saunf* (*Foeniculumvulgare*), *Chawal* (*Oriza sativa*).

Grisma-(Summer)-*Kumud* (*Nymphaea nouchali*), *Utpal* (*Nymphaea stellata*), *Khas* (*vetiveria zizanioidis*), *Durva* (*Cynodon dactylon*), *Yastimadhu* (*Glycyrrhiza glabra*), *Chandan* (*Santlum album*).

Varsa- (Rainyseason)- *Kaliyaka* (*Coscinium fenestratum*), *Til* (*Sesamum indicum*), *khas* (*Vetiveria zizanioidis*), *Jatamansi* (*Nordostachys Jatamansi*), *Tagar* (*Valeriana wallichii*), *Padmaka* (*Nelumbo nucifera*).

Sarada-(Autumn) -*Talis* (*Abies webbiana*), *Etkat* (*Sesbania cannabina*), *Pundarik* (*Nelumbo nucifera*), *Mulethi* (*Glycyrrhiza glabra*), *Khas* (*Vetiveria zizanioidis*), *Tagar* (*Vetiveria wallichii*) and *Agru* (*Aquilaria gallocha*).

Vagbhata- mentioned the benefits of *mukhalepa as-* 'mukhalepanashilanam dridam bhavati darshanam, vadanam chaprimlanam shlakshanam tamrasopamam'.(22/22)-which signifies that the persons who are habitual to application of paste of drug over face ,the vision become keen, the face never becomes dull and glows like lotus flower. *Astang Samgrah* ¹⁷

Mukhadusika chikitsa-(Acne)-In *Mukhadusika*, application of warm paste of *Lodhra* and *Tuvarika* (*Hydnocarpus laurifolia*) or leaves of *Vata* (*Ficus bengalensis*) and *narikela shukti* (coconut shell) or of *Saindhava*, *Vacha*, *Aksibhesaja* (*Sabar lodhra-Symplocos racemosa* or *paniculata*) and *Sidharthaka* (*Brassica compestris*) are prescribed.

Lancchana (Patches on the face), vyanga (hyper pigmentation) and nilika (Naevus) chikitsa-

In this group of diseases ,the nearest vein should be cut and the area covered with the paste of bark of trees having milky sap or that of *Bala* (*Sida cordifolia*), *Atibala* (*Abutilon indicum*), *Madhuka* (*Glycyrrhiza glabra*) and *Haridraor* of *Madhuka*, *Aguru*, *Payasya* (*Ipomoea digitata*) and *kaliyaka* (*Coscinium fenestratum*). *Tenderfruit of Kapittha* (*Feronia limonia*), *Tinduka* (*Diospyros peregrine*) and *Rajani* (*Curcuma longa*), root of *Amalika* (*Tamarindus indica*) and *Sukaradamstra*(teeth of pig) are also added with honey and ghee.

Yogaratnakar -In *kshudra roga* (minor diseases), *nidan chikitsa prakaran* dealing with diagnosis and prognosis there are 44 types of minor diseases of which some are related to skin care .¹⁸

Arumsika-In *arumsika* application of the paste of *Nilkamal* (*Nymphaeastellata*), *Amlaki* (*Emblica officinalis*), *Yastimadhu* (*Glycyrrhiza glabra*) in equal amount are prescribed. *Triphaladi tail* and *Haridradi tail* are also prescribed. *Triphaladi tail-oil* prepared by *Triphala*, *Yastimadhu*, *Bhringraj*, *Nilkamal*, *Sariva* and *Saindhav lavana* are prescribed. *Haridradi tail Oil* prepared by *Haldi*, *Daruhaldi*, *Chiraita*, *Triphala* bark of *Nimbi* and *Rakta chandan* are prescribed.

Vyanga (dark patches on the face)-*Tribhuvan*, *Bhangapatra* (*Cannabis sativa*) *Vidhara* (*Argyreia speciosa*) and *Sesam root* (*Dalbergia sissoo*) or *Masur* (*Lense culinaris*) exhibit positive results in dark patches. Application of bark of *Arjuna* (*Terminalia arjuna*), *Manjistha* (*Rubia cordifolia*), and *Adusa* (*Adhatoda vasica*) in equal amount with butter shows good positive result in *Vyanga*.

Complexion promoting-*Masur* (*Lense culinaris*) triturated with milk and applied with ghee



for enhancing complexion. *Kumkumadi tailam* also prescribed for the promoting complexion.

Yuvana Pidika-(pimples/acne)-In pimples application of paste of *Jaiphala (Myristica fragrans)*, *Raktacahandan (Pterocarpus santalinus)*, *Maricha (Piper nigrum)* or of *Lodhra (Symplocos racemosa)*, *Dhanyaka (Coriandrum sativum)*, *Vacha (Acorus calamus)* or of *Safed sarsapa, Vacha, Lodhra* and *saindhava* or of *Semal (Salmalia malabarica)* spine with milk.

Saragadhar Samhita- There are three kinds of *lepa* viz. *Dosaghna* (pacify the polluted humor), *Visaghna* (pacify the poisonous substance) and *Varnya* (cosmetic application for complexion).¹⁹

Complexion promoting- *Rakta chandana (Pterocarpus santalinus)* *Manjistha (Rubia cordifolia)*, *Lodhra (Symplocos racemosa)*, *Kustha (Saussurea lappa)*, *Priyangu (Callicarpa macrophylla)* and *Masura (Lense culinaris)* have complexion promoting properties.

Yauvana Pidika-(pimples/acne)- Ripened leaves of *Vata (F. bengalensis)*, *Malati*, *Rakta chandan (Pterocarpus santalinus)*, *Kustha (Saussurea lappa)*, *Kaliyaka (Cosciniun fenestratum)* and *Lodhra (Symplocos racemosa)* are made into paste and applied externally to remove pimples, black spot and patches on the face.

Arumsika-A paste of bark of *Khadira (Acacia catechu)*, *Aristha (Sapindus trifoliatus)*, *Jambu (Syzygium cumini)*, *Kutaja (Holarrhena antidysenterica)* and *Saindhav* (rock salt) processed in cow's urine which cures *Arumsika*.

Discussion and Conclusion- It is very clear from the above description that large number of herbs and other naturally obtained raw material have been formulated into cosmetics products and this pure natural cosmetics are without any synthetic chemical. They are not only devoid of side effects but also are

equally effective in comparison to their modern counterparts. The use of bioactive ingredients in cosmetics influence biological functions of skin and provides nutrients necessary for the healthy skin. *Ayurvedic* cosmeceuticals are very much prized for their safe, holistic action. Based on the vast and established knowledge of *Ayurveda*, herbal extracts, fruit extracts and essential oils are now being effectively used in medicines, food supplements and personal care. Ranges of *Ayurvedic* cosmeceuticals are available for ageless skin, tonifying it, smoothing its imperfections, and increasing its hydration level, thus restoring a radiant and healthy look. Such preparations actively protect the skin and prevent premature aging. The vast array of knowledge of medicinal plants mentioned in *Ayurvedic* texts are very helpful in the development of the new cosmetics products for present and future cosmeceuticals industry. This is one of the strengths of India with its *Ayurvedic* tradition

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AVARTANI – AN OVERVIEW

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The plant *Helicteres isora* Linn. of family Sterculiaceae is commonly known as Avartani. It is a sub-deciduous large shrub growing into small tree of 1.5 to 3 meter height in later stage with thin spreading branches. Young parts are rough and covered with scattered stellate hairs. Stems are up to 5 inch diameter. It is found throughout dry deciduous forests in the world, scrub, dry grasslands on slopes; below 100–600 m. Southeast Hainan, South Yunnan, Bhutan, Cambodia, India, Indonesia, Malaysia, Nepal, Sri Lanka, Thailand, Vietnam and North Australia. In India it is found in forests as undergrowth, especially in central and western India. Commonly met gregariously under Sal or miscellaneous forests in sub-Himalayan tracks and scattered in higher range up to 1400 meter.

Two varieties of the plant are distinguished, variety tomentosa, in which the underside of the leaves is glabrous (distributed mostly in northern and central India) and variety glabrescens, in which both sides of leaf are nearly glabrous (distributed in southern India). Ethnically its bark is used in diarrhoea, dysentery and fruit in colic, griping of bowel, flatulence and intestine worms in children etc.

Latinname : *Helicteres isora* Linn.

Family : Sterculiaceae

Synonyms :

Avartaphala, Ranglata, Vamavarta, Tindukini, Vibhandi, Mrigashringa, Mrigashringi

English name:

Deer's horn, East Indian screw tree, Indian screw tree and twisted horn.

External features:

- ♦ A large shrub growing into small tree of 1.5 to 3 meter height in later stage.
- ♦ Leaves – simple, serrated, variable in shape and size, alternate, 3-6 by 2-4 inches, obliquely cordate or rounded at the base, suddenly and shortly acuminate, irregularly toothed, scabrous, rough and dark green above, pubescent and paler with elevated nerves beneath, closely dotted on both surfaces with stellate hairs, 5 to 7 basal nerves.
- ♦ Flowers – 1-2inch long, axillary, distinctly bilabiate, solitary or 2-4 together in a cyme, bracteates, red flexed petals fading to grey later on or leaden blue when attacked by the insects, very fibrous and zygomorphic.
- ♦ Bark – It is grey in color, fairly smooth, thinly corky and strong. Young branches are rough with scattered stellate hairs.
- ♦ Fruit – 1.5-2 inch long, beaked and cylindrical, pubescent, composed of 5 spirally twisted carpels, which are 5-6 cm long, green when immature and greenish-brown when mature, linear. They ripen in March. The fruit is anterior of 5 follicle twisted together like a cork screw born at the tip of a long gynophore.

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- ♦ Seeds – Each follicle contains 15- 28 seeds placed in a row which are brown black in color, rhomboid, highly polished. When the fruit ripens, they untwine and scatter the seeds contained in them. They are numerous in number, tubercled, not winged, angular, testa loose, wrinkled and having scanty albumen.

References of Avartani in Ancient Text:

Although a number of drugs have been mentioned in these samhitas, description of Avartani is not found in Charaka Samhita, Sushruta Samhita and Ashtanga Sangrah.

ASHTANGA HRIDAYA (7th Century A.D.)

In Ashtanga Hridaya, Avartani is mentioned in formulation against kushtha in kushtha chikitsadhyaya in chikitsa sthana. 19/22

NIGHANTU PERIOD

Description of Avartani is not found in Saushruta Nighantu (6th-7th century), Ashtanga Nighantu (8th century A.D.), Sodhala Nighantu (12th century A.D.), and Hridaya Dipaka Nighantu (13th century A.D.), Madanapala Nighantu (14th Century A.D.), Raja Nighantu (17th Century A.D.).

DHANVANTARI NIGHANTU (10th-13th Century A.D.)

Avartani name has not been mentioned in this Nighantu but in the description of Moorva, name Marodaphali has been used, which is the synonym of Avartani.

ABHIDHAN RATNAMALA (SHADARASA NIGHANTU 12th Century A.D.)

According to this Nighantu, Avartani and Raktapushpi are the synonyms given to *Helicteres isora*.

KAIYADEV NIGHANTU (15th Century A.D.)

The name Avartani has not been described in this Nighantu but in the description of Moorva, it has been mentioned that Marodaphali is used in place of Moorva. There it has been mentioned about Marodaphali that it is sheeta, kashaya, kriminashaka and tridoshahara.

BHAVAPRAKASH NIGHANTU (16th Cent. A.D.)

The name Avartani has not been described in this Nighantu but in the context of Mura, it is written “Some people take Marodaphali in the place of Mura which does not appears to be right”.

SHALIGRAM NIGHANTU (19th Cent. A.D.)

Description of the plant is found in this Nighantu by the name of mesh-shringi and it is bitter in taste, ruksha, sheeta and rasayan. Properties and uses of the drug are mentioned here. It is said to be a large tree like Parushak with red flowers. Fruit is long and cylindrical. The tree is found on mountains.

SHANKAR NIGHANTU

In this Nighantu name of the drug is described as the name of Marodaphali. It is a strong cover of grass like a rope which cures the inflammation and ‘vatvikara’. It decreases the potency in males and milk in females. It is brown in colour and bitter in taste. It is given in the dose of 3 maasha.

MAHAUSHADH NIGHANTU (1971)

In this Nighantu, it is said that “in Uttar Pradesh Marodaphali is used in the place of Moorva, but in fact it is Avartani.”

NIGHANTU ADARSH (Purvardh) (20th Cent. A.D.)

The name Avartaphala and Marodaphali has been used for this plant in this Nighantu. The



commentator said that it is found in forests. It is a tree of 2 – 5 feet height with big leaves, red colour beautiful flowers and 1 ½ – 2 inch long twisted fruits. Useful parts of the plant are fruit, root and bark. It is kashaya, sheeta, katu in vipaka and tridosh har. It is used in diarrhea, abdominal pain and worm infestation in children. For adults its churna is given in dysentery in the dose of ¼ tola. Decoction of root bark is used in diabetes.

PRIYA NIGHANTU (20th Century A.D.)

This Nighantu is the latest one, written by ‘Acharya Priya Vrata Sharma’. Avartani is described in sharaadivarga of this Nighantu. The author said that the small tree of Marodaphali is like Parushak which bears twisted fruits. It is kashaya, sheeta virya and stambhak. It is used in atisar, kapha-pitta vikar, shula, krimi and rakta-pitta.

SARASVATI NIGHANTU

Marodaphali is used in place of Moorva.

PHARMACODYNAMICS ACCORDING TO DIFFERENT NIGHANTUS:

Nighantu	Rasa	Guna	Virya	Vipaka	Doshakarm
Kaiyadev Nighantu	kashaya	-	sheeta	-	tridosahar
Shaligram Nighantu Bhushan	kashaya	ruksh	sheeta	-	pitta-kapha- raktashamak
Shankar Nighantu	-	-	-	-	vatashamak
Nighantu Adarsh (Purvardh)	kashaya	-	sheeta	katu	tridosahar
Priya Nighantu	kashaya	-	sheeta	-	Pitta kapha shamak
Brihad Dravyagunadarsh	kashaya	-	sheeta	-	tridosahar
Dravyaguna Hastamalak (II Part)	katu, tikta, kashaya	Laghu, ruksh	ushna	katu	Vata kapha shamak
Dravyaguna Vigyan – II (PV Sharma)	kashaya	Laghu, ruksh	sheeta	katu	pitta-kapha shamak
Dravyaguna Vigyan (G. Pandey)	kashaya	Laghu, snigdha	sheeta	katu	tridosahar



INDICATIONS OF AVARTANI IN DIFFERENT NIGHANTUS:

DISEASES	NIGHANTU PART USED	Ni. Aa.	Sau. Ni	Sha. Ni. Bh.	Br. D.A.	D. H.	B.P.N i.	P.Ni.
Atisar	Root Bark, Fruit, Bark	+			+	+	+	+
Pravahika	Root Bark, Fruit, Bark, Seed	+			+	+	+	
Udarshula	Root Bark, Fruit, Seed and Root	+			+	+	+	+
Prameha	Root Bark, Fruit, Root	+			+	+	+	
Raktaatar	Fruit	+				+		
Raktpravahika	Fruit	+						
Krimi	Fruit, Seed				+	+		+
Aadhman	Fruit and Root				+			
Mutraatar	Fruit				+	+		
Aanah	Fruit and Bark						+	
Kandu	Leaves						+	
Karna sraav	Fruit and Seed					+		
Shoth	Fruit					+		
Shvaas	Root					+		
Kaas	Root					+		
Jvar	Fruit					+		
Purushatv nashak	Root Bark		+	+				
Stanyarodhak	Root Bark		+	+				



Properties:

- ♦ **Rasa-** Kashaya
- ♦ **Guna-** Laghu, ruksh
- ♦ **Virya-** Sheeta
- ♦ **Vipaka-** Katu
- ♦ **Doshakarm-** Pitta-kapha shamak
- ♦ **Karma-** Stambhan, Vran-ropan, Shul prashaman, krimighn, Raktarodhak, Mutra sangrahaniya
- ♦ **Prayoga-** Raktasraav, Vran, Atisar, pravahika, udar shul, Krimi, Raktaatisar, prameh
- ♦ **Doses-** Kvaath- 50 to 100ml, Phala churna - 3 to 6 gm
- ♦ **Formulations-** Baal rakshak ghutti, Abhayadyavaleha, Gandharva churna, siddh praneshvar ras, varunadi kvaath, Pashanabheda aasava

Important Chemical Constituents:

The chemical constituents found in the plant are Quinoline alkaloid malatyanine. In the root chemical constituents found are Cucurbitacin \hat{a} , Iso-cucurbitacin \hat{a} , Betulinic acid. The Bark has Chloroplast pigments, Phytosterol, Hydroxycarboxylic acid, Orange yellow colouring matter, Saponins, Sugars, Phlobo tannins, Lignin. Leaves have Tetratriacontanyl, Tetratriacontanoate, Tetratriacontanoicacid, Tetratriacontanol, Flavone-5, 8-dihydroxy-7-4'-dimethoxyflavone, Trifolin, Hibifolin, Sitosterol. Seeds have Diosgenin. The Fruit has Fatty acid, Tannin, Triterpenoids, Rosmarinic acid, 4'-O- β -D-glucopyranosylrosmarinic acid, 4,4'-O-di- β -D-glucopyranosylrosmarinic acid, 4'-O--D-glucopyranosylisorinic acid. The fibre of the plant named Isora Fibre contains Cellulose 74.8, Lignin 23.0, Ash 0.92 1%, Fat 1.09, Moisture content 5-6, Ca(ppm) 713.45, Mg(ppm) 37.93, Fe(ppm) 16.10, K(ppm) 10.54, Na(ppm) 10.42(%)

Conclusion:

It is evident from the above description that Avartani is a small tree and is native to India. It has no description in Vedas. There is no reference seen in samhitas and nighantus upto 17th cent. A.D. of this plant. Avartani name is found in Ashtang Hridaya. Avartaphala, Ranglata, Vamavarta, Tindukini, Vibhandi, Mrigashringa, and Mrigashringi are the names used as synonyms for Avartani in various nighantus. In Priya Nighantu, Avartani is described in sharaadi varga. Reviewing various Floras, various tribes in India use this plant for diarrhea, dysentery, stomach ache, skin ailments, intestinal worms, diabetes and snake bite.

It has variety of biological/pharmacological activities such as antibacterial activity, glucose uptake activity in L-6 cells, antidiabetic activity, antidiarrheal activity, antioxidant activity, hypolipidaemic activity, antinociceptive activity, hepato-protective activity and cardiotoxic activity. Its fruits are used as astringent, stomachache, vermifuge, vulnerary and useful in bowel gripes. ISORA is a natural fiber present in the bark of *Helicteres Isora* Linn. This fiber is used as a potential reinforcement in natural rubber and polyesters. It is used for making ropes. Stems are used for fencing and thatching frames.

Overall *Helicteres Isora* Linn. is a very important medicinal plant.

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मधुमेह रोग में मुस्तादि क्वाथ घनवटी का चिकित्सापरक अध्ययन

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सारांश

वर्तमान वैज्ञानिक प्रगति मानव को यंत्राश्रित कर एक ओर त्वरित जीवन प्रदान कर रही है, वहीं दूसरी ओर उसे आलसी बनाकर स्वस्थवृत्त पालन में बाधक बन उसके जीवन हास का मुख्य कारण बन रही है। "मधुमेह रोग में मुस्तादि क्वाथ घनवटी का चिकित्सापरक अध्ययन" विषय पर प्रायोगिक अध्ययन हेतु 100 आतुरों का चयन शासकीय स्वा. आयुर्वेद महाविद्यालय, रीवा, म.प्र. के चिकित्सालय के बहिरंग एवं अंतरंग रोगी विभाग से किया गया एवं उन्हें दो समूह क्रमशः "अ" एवं "ब" में विभक्त कर उन पर "मुस्तादि क्वाथ घनवटी एवं काल्पनिक औषधि का प्रयोग कर पथ्यापथ्य का निर्देशन देते हुये संशामन एवं Placebo चिकित्सा का प्रभाव देखा गया। मुस्तादि क्वाथ घनवटी का समूह अ में highly significant परिणाम मिला ।

प्राक्कथन

विकसित एवं विकासशील देशों में उच्च मध्यम वर्ग में संतर्पण जन्य व्याधियां व्यापक रूप से फैल रही है। वर्तमान समय में मधुमेह रोग ने समस्या का रूप धारण कर लिया है। यद्यपि आयुर्वेद में मधुमेह का व्याधि के रूप में स्वतंत्र रूप से वर्णन नहीं है, परन्तु आयुर्वेद में वर्णित प्रमेह के भेदों में वातज प्रमेह के भेद के रूप में चरक ने निदान स्थान में वर्णन किया है। आधुनिक युग की समस्यायें, तनाव, खान-पान, रहन-सहन में आये परिवर्तन एवं शारीरिक श्रम की कमी के कारण होने वाली स्थूलता आदि कारणों से मधुमेह के रोगियों की संख्या में वृद्धि हो रही है। यह रोग जिसको एक बार हो जाता है उसे जल्दी नहीं छोड़ता है "प्रमेहोऽनुषंगिणाम" इस व्याधि के हो जाने के पश्चात् उपद्रव स्वरूप शरीर में बहुत सी घातक व्याधियां जैसे – हृदय रोग, वृक्क रोग, नेत्र रोग तथा तंत्रिका तंत्र की नाड़ियों में क्षति पहुंचती है। मधुमेह की व्यापक घातकता को देखते हुये एतद् आयुर्वेदीय शोध कार्य का चयन किया गया।

* प्रवक्ता, काय चिकित्सा विभाग, राजकीय आयुर्वेदिक कालेज, अतर्रा, बांदा ** प्रवक्ता, रोग निदान एवं विकृति विज्ञान विभाग, मेजर एस. डी. सिंह आयुर्वेदिक मेडिकल कालेज, फर्रुखाबाद, *** प्रवक्ता, बालरोग विभाग, राजकीय आयुर्वेदिक कालेज, अतर्रा, बांदा, (उ०प्र०)

कार्य पद्धति

रोगियों का चयन: इस अध्ययन हेतु मधुमेह के 100 रोगियों का चयन शासकीय स्वा. आयुर्वेद महाविद्यालय, रीवा, म.प्र. के चिकित्सालय के बहिरंग विभाग से लिखित सहमति के उपरान्त किया गया, जिसमें उपद्रव युक्त रोगियों को नहीं लिया गया। रोगियों का चयन निम्न आधार पर किया गया ।

लक्षणात्मक आधार :

रोगी एवं रोग परीक्षणोपरान्त ऐसे "मधुमेह" रोगी का चयन किया गया जिसमें –

- (1) मधुमेह रोग के लक्षण मिलते हों।
- (2) मूत्र एवं मूत्रवह स्रोतों दृष्टि के लक्षण से युक्त रोगी।

नैदानिक आधार :

आधुनिक मधुमेह विषयक प्रयोगशालीय परीक्षण के आधार पर

- (a) Fasting Blood Sugar Test
- (b) Post Prandial Blood Sugar Test
- (c) Urine Sugar Test

रोगी अपवर्जन आधार :

अनुसंधान हेतु ऐसे मधुमेह रोगियों का चयन नहीं किया गया जो उपद्रव युक्त या गंभीर जटिलताओं से जैसे – हृदय रोग, उच्च रक्त चाप, पक्षाघात, गर्भिणी, इन्सुलिन आश्रित मधुमेही (IDDM), कामला सहज प्रमेह (जन्मजात मधुमेह) से ग्रसित हों।

रोगियों के दो समूह: मधुमेह के रोगियों को 50-50 रोगियों के दो समूह क्रमशः "अ" एवं "ब" समूह में विभक्त कर तुलनात्मक अध्ययन किया गया।

समूह "अ" – इस समूह में 50 रोगियों में मुस्तादि क्वाथ घनवटी एवं पथ्यापथ्य का प्रयोग किया गया।



समूह "ब" – इस समूह में 50 रोगियों में काल्पनिक औषधि (Placebo Medicine) एवं पथ्यापथ्य का सेवन कर प्रायोगिक अध्ययन किया गया।

औषध योग:

1. योग का नाम – मुस्तादि क्वाथ घनवटी
2. रोगाधिकार – प्रमेह (मधुमेह) रोग
3. मूलपाठ – मुस्ताफलत्रिकनिषासुरदारुमूर्वाऐन्द्री च लोघ्न सलिलेन कृत कशायः।
पाने हितः सकलमेह भवे गदे च,
मूत्रग्रहेषु नियोजनीयः।।(भै.र. 37/18)

औषध निर्माणविधि :-

मुस्तादि क्वाथ घनवटी में प्रयुक्त सभी 9 द्रव्यों को समान मात्रा में लेकर यवकुट, किया गया तत्पश्चात् 8 गुना जल में डुबोया गया एवं क्वाथ हेतु रखा गया। द्रव्यों के नीरस होने एवं द्रव के अर्धांश शेष रहने पर उतार कर ठंडा किया गया, तत्पश्चात् छने हुये द्रव्य (क्वाथ) को पुनः मंदाग्नि पर रखकर घन बनते तक दर्वी पात्र से क्वाथ को बार-बार चलाया गया। घन तैयार होने पर उतार लिया गया एवं इसके पश्चात् छाया शुष्क किया गया। तत्पश्चात् शास्त्रोक्त प्रमाण में घनवटी तैयार की गई। मुस्तादि क्वाथ घनवटी" 500 मि.ग्रा. की मात्रा में बनाई गयी।

औषध प्रयोग:

- 5-16 वर्ष – 250-500 मिग्रा./दिन में दो बार
17-65 वर्ष – 500 मिग्रा -1 ग्रा./दिन में दो बार

अनुपान: मुस्तादि क्वाथ घनवटी चबाकर उष्ण जल के अनुपान से करने के लिये निर्देशित किया गया है।

औषध सेवन काल: 2 मास तक औषध सेवन करवाया गया

परिणाम विश्लेषण हेतु निर्धारित लक्षणों का मापदण्ड :-

प्रस्तुत अध्ययन में परिणाम का विश्लेषण रोगी के मधुमेह जन्य निम्न लक्षणों में कमी एवं शारीरिक स्वास्थ्य के आधार पर किया गया है, तथा प्राप्त परिणामों का विश्लेषण विभिन्न सांख्यिकीय विधियों द्वारा किया जायेगा।

प्रायोगिक अध्ययन में परिणाम आंकलन के निम्न लक्षणों के मापदण्डों का निर्धारण किया गया –

(1) प्रभूतमूत्रता (Polyuria) :-

(A) मात्रा (Volume) लीटर/प्रतिदिन

- 0 – 1.5 से 2.5 लीटर/प्रतिदिन
1 – 2.5 से 3.0 लीटर/प्रतिदिन
2 – 3.0 से 3.5 लीटर/प्रतिदिन
3 – > 3.5 लीटर/प्रतिदिन

(B) समय में/प्रतिदिन (Frequency in Day)

- 0 – 3-5 बार/ प्रतिदिन
1 – 6-7 बार/प्रतिदिन
2 – 8-10 बार/प्रतिदिन
3 – > 10 अधिक बार/प्रतिदिन

(C) समय में/रात्रि (Frequency at Night)

- 0 – 1-2 बार/रात्रि
1 – 3-5 बार/रात्रि
2 – 6-7 बार/रात्रि
3 – > 7 बार/रात्रि

(2) अविल मूत्रता (Transparency of Urine)

"मूत्र की पारदर्शिता"

- 0 – कांच की तरह पारदर्शी
1 – पारदर्शी परन्तु गंदलापन युक्त
2 – गंदलापनयुक्त अल्पपारदर्शी
3 – गंदलापनयुक्त अपारदर्शी

(3) पिपासाधिक्य (Polydipsia)

दिन में जल ग्रहण की मात्रा

- 0 – 1.5 से 2.5 लीटर/प्रतिदिन
1 – 2.5 से 3.0 लीटर/प्रतिदिन
2 – 3.0 से 3.5 लीटर/प्रतिदिन
3 – > 3.5 लीटर/प्रतिदिन



- (4) क्षुधाधिक्य (Polyphagia)
भोजन ग्रहण की मात्रा
0 – सामान्य मात्रा में भोजन
1 – दिन में दो बार भोजन
2 – दिन में 2-3 बार भोजन
3 – दिन में 3 बार या अत्याधिक भोजन
- (5) चलने पर वेदना (cramp on walking)
0 – कोई वेदना नहीं
1 – 1 कि.मी. चलने पर वेदना
2 – ½ कि.मी. चलने पर वेदनास
3 – ½ कि.मी. चलने में असमर्थ
- (6) क्लम : (lethargy)
0 – कोई थकान नहीं
1 – सामान्य कार्य करने पर थकान
2 – निरंतर थकान का अनुभव करता हो
3 – आराम की स्थिति में भी थकान का अनुभव हो।
- (7) मुखशोष : (dryness of mouth)
0 – कोई मुखशोष नहीं
1 – कभी-2 मुखशोष होता है।
2 – मुखशोष का बना रहना, लेकिन कभी-कभी मुखशोष नहीं होता है।
3 – मुखशोष हमेशा बना रहना।
- (8) आलस्य : (laziness)
0 – कोई आलस्य नहीं
1 – संतोषजनक कार्य करता हो
2 – संतोषजनक कार्य न करता हो
3 – जिसे बिल्कुल ही कार्य करने की इच्छा न हो।
- (9) करपाददाह : (Burning sensation in hands & feet)
0 – कोई दाह नहीं
1 – कभी-कभी दाह होता है।
2 – दाह नियमित होना परन्तु तीव्रता नहीं
3 – तीव्र दाह का हमेशा बना रहना।
- (10) करपादसुप्ति : (Loss of sensation in hands & feet)
0 – कोई सुप्तता नहीं
1 – कभी – 2 सुप्तता होना
2 – सुप्तता का बना रहना लेकिन कभी-2 नहीं
3 – सुप्तता का हमेशा बना रहना
- (11) अतिनिद्रा (Excessive sleep)
0 – 6-7 घण्टे संतोष जनक होना
1 – 7-9 घण्टे संतोष जनक होना
2 – 9-10 घण्टे संतोष जनक होना
3 – > 10 घण्टे संतोष जनक होना
- (12) शरीर भार में कमी (Weight loss)
0 – भार में कोई कमी नहीं
1 – 3 कि.ग्रा. में कम भार में कमी
2 – 3-6 कि.ग्रा. भार में कमी
3 – > 6 कि.ग्रा. या अधिक भार में कमी
- (13) रक्तगत शर्करा : (Blood glucose)
प्रयोगशालीय परीक्षण के आधार पर सांख्यिकी विश्लेषण किया गया।
- (14) मूत्रगत शर्करा : (Urine glucose)
प्रयोग शालीय परीक्षण के आधार पर सांख्यिकी विश्लेषण किया गया।
- चिकित्सा के लाभ निर्धारण का आधार :-**
चिकित्सा के लाभ का निर्धारण करने के लिये इस व्याधि के लक्षणों एवं चिन्हों में प्राप्त कमी के आधार पर निम्नानुसार किया गया है-
- | | |
|---------------|--------------------|
| 1. अलाभ | = 00 – 25 प्रतिशत |
| 2. आंशिक लाभ | = 26 – 50 प्रतिशत |
| 3. मध्यम लाभ | = 51 – 75 प्रतिशत |
| 4. अधिकतम लाभ | = 76 – 100 प्रतिशत |



परिणाम एवं आकलन

तलिका -1: समूह "अ" के रोगियों में चिकित्सा के प्रभाव का सांख्यिकीय विवरण

क्रमांक	लक्षण	Mean Score		Change of %	S.D. of Difference	S.E. of Difference	t value Paired	P Value	Remark
		B.T.	A.T.						
1	प्रभूत मूत्रता	2.285	1.10	51.85%	0.585	0.807	14.65	< 0.0001	H. S.
2	अविल मूत्रता	1.88	0.88	53.19%	0.903	0.127	7.826	< 0.0001	H. S.
3	पिपासाधिक्य	1.90	0.54	71.57%	0.842	0.119	8.891	< 0.0001	H. S.
4	क्षुधाधिक्य	1.70	0.76	55.29%	0.739	0.104	8.984	< 0.0001	H. S.
5	चलने पर वेदना	1.92	0.72	62.50%	0.751	0.106	10.161	< 0.0001	H. S.
6	क्लम	1.72	0.38	77.90%	0.767	0.108	8.667	< 0.0001	H. S.
7	मुखशोष	1.84	0.64	65.22%	0.727	0.102	10.111	< 0.0001	H. S.
8	आलस्य	2.02	0.72	64.35%	0.857	0.212	6.600	< 0.0001	H. S.
9	करपाददाह	1.92	0.76	61.22%	0.798	0.112	9.912	< 0.0001	H. S.
10	करपादसुप्ति	1.92	0.82	57.29%	0.788	0.111	9.859	< 0.0001	H. S.
11	अतिनिद्रा	1.88	0.48	74.46%	0.755	0.106	11.225	< 0.0001	H. S.
12	भार में कमी	1.84	0.94	48.91%	0.788	0.111	9.859	< 0.0001	H. S.

टिप्पणी :-

B.T. = Before treatment

T value = Student t test

A.T. = After treatment

P. valu = Probability

S.D. = Standard Deviation

S = Significant

S.E. = Standard Error

H.S. = Highly Significant

Here Degree of Freedom is - 49



तालिका -2 समूह "ब" के रोगियों में चिकित्सा के प्रभाव का सांख्यिकीय विवरण

क्रमांक	लक्षण	Mean Score		Change of %	S.D. of Difference	S.E. of Difference	t value	P Value	Remark
		B.T.	A.T.						
1	प्रभूत मूत्रता	2.16	1.86	13.88	0.462	0.065	4.583	> 0.05	N. S.
2	अविलमूत्रता	1.96	1.56	20.40	0.606	0.085	4.667	> 0.05	N. S.
3	पिपासाधिक्य	1.96	1.46	25.51	0.580	0.082	6.093	> 0.05	N. S.
4	क्षुधाधिक्य	1.90	1.22	35.79	0.471	0.067	4.802	> 0.05	N. S.
5	चलने पर वेदना	1.92	1.32	31.25	0.494	0.069	5.715	> 0.05	N. S.
6	क्लम	1.98	1.29	34.84	0.540	0.076	5.755	> 0.05	N. S.
7	मुखशोष	1.94	1.18	39.18	0.503	0.071	6.461	< 0.05	S
8	आलस्य	2.00	1.48	26.00	0.498	0.070	5.957	> 0.05	N. S.
9	करपाददाह	2.00	1.51	24.50	0.501	0.071	6.205	> 0.05	N. S.
10	करपादसुप्ति	1.86	1.46	21.50	0.494	0.699	5.715	> 0.05	N. S.
11	अतिनिद्रा	2.08	1.32	36.53	0.504	0.072	6.725	< 0.05	S
12	भार में कमी	1.98	1.86	3.06	3.094	0.437	0.274	> 0.05	N. S.

तालिका -3 नैदानिक परीक्षण के आधार पर समूह "अ" के रोगियों में चिकित्सा के प्रभाव का सांख्यिकीय विवरण

क्रमांक	नैदानिक लक्षण	Mean Score		Change of %	S.D. of Difference	S.E. of Difference	t value	P value	Remark
		B.T.	A.T.						
1	Fasting Blood Sugar	1.86	0.78	58.06	0.633	0.896	12.05	< 0.001	H. S.
2	Post Prandial Blood Sugar	1.90	0.72	62.10	0.528	0.075	14.453	< 0.001	H. S.
3	Urine Sugar	0.86	0.40	53.49	0.503	0.071	6.461	< 0.01	H. S.



तालिका – 4 नैदानिक परीक्षण के आधार पर समूह "ब" के रोगियों में चिकित्सा के प्रभाव का सांख्यिकीय विवरण

क्रमांक	नैदानिक लक्षण	Mean Score		Change of %	S.D. of Difference	S.E. of Difference	t value	P value	Remark
		B.T.	A.T.						
1	Fasting Blood Sugar	1.76	1.30	26.14	0.350	0.049	2.824	> 0.05	N. S.
2	Post Prandial Blood Sugar	1.80	1.46	18.89	0.350	0.051	2.84	> 0.05	N. S.
3	Urine Sugar	1.10	0.98	10.90	0.328	0.464	2.58	> 0.05	N. S.

तालिका –5 चिकित्सा का सम्पूर्ण प्रभाव/कुल परिणाम शास्त्रोक्त लक्षणों के आधार पर

क्रमांक	परिणाम	समूह "अ"		समूह "ब"		कुल रोगी	कुल प्रतिशत
		रोगी संख्या	प्रतिशत	रोगी संख्या	प्रतिशत		
1	अधिकतम लाभ (75%–100%)	14	28	02	04	16	16%
2	मध्यम लाभ (50%–74%)	22	44	19	38	41	41%
3	अल्प लाभ (25%–49%)	08	16	11	22	19	19%
4	कोई लाभ नहीं (0%–24%)	06	12	18	36	24	24%
		50	100%	50	100%	100	100%

तालिका –6 चिकित्सा का सम्पूर्ण प्रभाव/कुल परिणाम नैदानिक लक्षणों के आधार पर

क्रमांक	परिणाम	समूह "अ"		समूह "ब"		कुल रोगी	कुल प्रतिशत
		रोगी संख्या	प्रतिशत	रोगी संख्या	प्रतिशत		
1	अधिकतम लाभ (75%–100%)	06	12	02	04	08	08
2	मध्यम लाभ (50%–74%)	24	48	08	16	32	32
3	अल्प लाभ (25%–49%)	13	26	13	26	26	26
4	कोई लाभ नहीं (0%–24%)	7	14	27	54	34	34
		50	100%	50	100%	100	100%



परिणाम विश्लेषण

तालिका क्रमांक 5 से प्राप्त विवरणों के द्वारा समूह 'अ' के आतुरों पर शास्त्रोक्त लक्षणों के आधार पर अधिकतम लाभ 28%, मध्यम लाभ 44%, अल्प लाभ 16% प्राप्त हुआ एवं 12% को कोई लाभ नहीं प्राप्त हुआ। समूह क्रमशः 'ब' के आतुरों पर अधिकतम लाभ 04%, मध्यम लाभ 38%, अल्प लाभ 22% प्राप्त हुआ एवं 36% को कोई लाभ नहीं प्राप्त हुआ।

तालिका क्रमांक 6 से प्राप्त विवरणों के द्वारा समूह क्रमशः 'अ' के आतुरों पर नैदानिक लक्षणों के आधार पर अधिकतम लाभ 12%, मध्यम लाभ 48%, अल्प लाभ 26% प्राप्त हुआ एवं 14% को कोई लाभ नहीं प्राप्त हुआ। समूह क्रमशः 'ब' के आतुरों पर अधिकतम लाभ 04%, मध्यम लाभ 16%, अल्प लाभ 26% प्राप्त हुआ एवं 54% को कोई लाभ नहीं प्राप्त हुआ।

निष्कर्ष

इस प्रकार उपर्युक्त तथ्यों से यह निष्कर्ष निकलता है कि "मुस्तादि क्वाथ धनवटी" मधुमेह रोग के सम्प्राप्ति को विघटित करने के लिये उत्तम औषध योग है तथा अनुपान के रूप में प्रयुक्त उष्ण जल के साथ सम्प्राप्ति विघटन क्षमता और अधिक बढ़ जाती है। मधुमेह रोग के सम्प्राप्ति विघटन के फलस्वरूप मेद द्वारा अवरुद्ध हुये वायु का मार्ग प्रशस्त हो जाता है, जिस कारण बढ़ा हुआ वात दोष सम अवस्था में प्राप्त हो धातु की क्षीणता को कम कर विषमग्नि को समाग्नि में परिवर्तित कर देता है तथा धातु पोषण क्रम समुचित रूप से पूर्ण होने लगता है।

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**ROLE OF SOCIAL MEDIA IN POPULARIZATION OF
AYURVED**

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'Lose weight within 15days by Panchkarma techniques from renowned Doctors... Contact 9234123493'. Nowadays such advertisements are common enough, in fact such advertisements are the foremost effective tools in drawing attention of the masses towards a particular topic.

People may or may not refer authentic treatises regarding the topic of their choice but if that topic is displayed properly on social media, they will be attracted to it like a magnet. Say for instance, many people may not be aware of the fact that weight can be reduced by Panchkarma therapies but by visualizing advertisements like the one mentioned above, people may visit Panchkarma centres for their benefit.

Ayurved is one such topic which needs to be displayed to the masses. Call it Medical Science or the Science of stabilizing the human life, it is one of the most ancient medicinal sciences and is the subsection of Atharv veda. Rivers tributing to form the ocean of Ayurved are Bruhat trayi and Laghu trayi.

These subjects are studied only by limited number of people of our society. Thorough studies and research are possible only in the institutions meant for studying the course of Ayurved.

These limited people practise medicine or surgery or Panchkarm after completion of their courses. But why should people treat themselves from such

Ayurvedic practitioners? Why should not people visit their regular Allopathic practitioners? Is there any added benefit in following Ayurvedic medicine? Are there any side effects? Are there long term medicinal regimes? Many such questions still keep arising in the minds of common masses.

Ayurved even though being a self-sufficient and full-proof medicinal science yet has not been able to be the most followed line of treatment. One of the reasons behind this agony may be lack of its popularization.

What is popularization? Basic meaning of popularization can be explained by the example of celebrities. Every other individual possesses special qualities. Celebrities are none other than human beings like us with some special qualities. These celebrities get a platform for displaying their special qualities like platform of cinema, television, newspapers, hoardings, and even radio. As a result, they get popular among the masses and their names become household. Even toddlers become acquainted of these celebrities-just because of their popularization.

Even sportsmen get popular similarly. A cricket match is going on in one corner of the world but still the rest of the world can witness that match thanks to the social media. It can be said that whatever gets popular on social media receives maximum attention and interest from the public.

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A 'Medium' is a substance through which something is conveyed. Media is its plural form. One meaning of such a 'medium' is medium of propagation of sound which can be air or water. Another meaning is medium of propagation of news and data which can be television, radio, internet, newspapers, journals, magazines, hoardings, banners and advertisement pages. These media of propagation of news and data when involve the activity of more than one person becomes 'social media'. As always said, 'man is a social animal'- who finds solace in the company of others and always needs the company of others. Thus 'social' media become indispensable in man's life.

We also need to talk about the pros and cons of these social media. When they are used to promote something that is worth it, they can be helpful but when they promote indecent things say like cigarette smoking or alcohol consumption, they can prove to be detrimental for the society. Keep aside liquor or tobacco, the promotion of some over the counter drugs too can be equally hazardous-if the drug consumption is not monitored by a qualified medical practitioner. For example, nowadays we can see an advertisement for antacid syrup and tablets. They claim to provide 'immediate and long lasting' relief from acidity. This was not enough for the admen that they even show household remedies like drinking cool milk in bad light. After having seen such an advertisement a common man will certainly come under the impression that whenever acidity will trouble him all that he should do is to buy an antacid tablets strip and keep popping the pills till he is fine. If acidity reappears, pop some more pills. Well but the fact is that excess of antacids (active ingredient magnesium trisilicate) causes side effects like constipation, headache and nausea. Appears to be simple and even the taste of that antacid is user friendly but which common man knows that in the long run, these tablets

and syrups are going to interfere with the harmony of the bodily systems.

Which common man knows that 'Sirf ek goli aur sar dard se aaram' does not actually provide relief but aggravates the condition and suffering of people.

Compared to all these modern allopathic drugs, advertisements promoting our Ayurvedic medicines are meagre. Which common man knows the Ayurvedic formulations that relieves headache? We admit, that, yes, there are some advertisements promoting Ayurvedic formulations like arishta and churn Baut the present scenario clearly depicts that comparatively Allopathic drugs are endorsed more than Ayurvedic ones.

Our Ayurvedic medicines are such that we may not even have to visit the shop. Just take out a handful of Tulsi leaves from your own balcony garden, extract its juice and consume it with honey to relieve your flu. But nobody sponsors Tulsi plant so there cannot be advertisements promoting Tulsi usage.

Still there is another way of popularizing such simple Ayurvedic medicines which is gaining response from many parts of our country. The way is of chat shows on televisions. Some chat shows have become doctor chat shows from mere chat shows. The management committee, of those shows, invite reputed doctors of variable fields to discuss on a particular topic like weight management, proper diet and even about diseases like coronary heart diseases or diabetes. Doctors practicing Ayurvedic medicine are also being called for such shows. In these chat shows, viewers from across the parts of the state contact on the phone numbers displayed on the show to ask their ailment related queries to the doctors present on the show. Many get answers to their queries even by not asking questions directly. Also due to this, many people may get inquisitive about Ayurved and



may want to visit Ayurvedic clinics. The famous 'Aajibaicha Batva' is being used since times immemorial but such ventures like chat shows like have started to take our Ayurved to its next level. People have started to discover the new face of treatment i.e. Ayurved. Its Indian roots make it even more acceptable.

This was about television a similar concepts are used by radio programs. Similar doctor chat shows, the only difference being that you can hear the expert doctors instead of seeing them speak.

If we surf sites related to Ayurved on the internet, we find some sites wherein there are some question - answer systems related to general ailments. The visitors type their problems related to health and one of the expert committee answers their questions to the most possible extent. But such internet treatments are not quite acceptable as yet.

As social media can popularize something in the positive sense, it can also bring notoriety. As recently, some foreigners had claimed that Ayurvedic Ras kalp are harmful due to their metallic contents. The result of such news was that Ayurvedic formulations were banned to be marketed from several countries outside India. Also many modern medical practitioners have challenged some of our therapies like nasya and karnpooran. They say nasya and karnpooran involve pouring oils and medicines in body's natural orifices and this can be damaging to the body especially to the supra-clavicular region.

But why has nobody still challenged nasal sprays and ear-drops? Nasya and karnpooran if practiced in an improper way can be as damaging as reliable they prove to be when done skillfully. For the same reason, people should first get acquainted with our therapies properly.

Peacock is a beautiful bird. The male one possesses colourful and attractive plumage whereas the

female peahen is devoid of any feathers. Let us consider that people do not know what a peacock is. If someone spreads the fact through the social media that the female peahen has no feathers - even before people try to know what a peacock is, it may so happen that some people would not even wish to know more about the bird. Similar fate is of Ayurved, before its popularization, before its actual nature is revealed to the public, its negative aspects are brought in front of the people.

Still there is time. Not across our country alone, the world should get acquainted with our Indian medicinal science. In this, social media can prove to be instrumental up to a larger extent. Those who are masters in Ayurved should spare some time for its propagation. This will help others when they will gain knowledge whereas those involved in the act of promotion will themselves get to learn many more things. There must be active participation in world medical meet ups. If research is encouraged well here, those conclusions can be put forth on international platforms. When ample proves and statistical data about a particular research would be available, anybody can neither deny that nor challenge that.

Such kinds of efforts will be benefitting the common man as well. As Allopathic medicines are used worldwide on a massive scale, the related side effects in most of the cases are also massive. So wherever possible if Ayurvedic formulations can substitute modern synthetic drugs, it will be always better.

There is a lot of data about Ayurvedic principles and medicines on the internet. We should tally that data and make sure that it matches with the data mentioned in treatises.

The black spot on the names of Ras kalp should be abolished soon. If people are presented with experimentally proved observations and statistical data, they will certainly believe us. People want results,



the sooner the better. If people are encouraged through short films or through news channels or chat shows that they should start paying much more attention to their health and that they should approach the doctors when their disease is in an initial stage. In this initial stage of disease, our drugs would be the most effective and will be comparatively quicker to act too.

A newer trend can be that in schools, even in pre schools, in colleges and in offices, a short movie presenting the basic ideologies of Ayurved like Dincharya, Rutucharya and the concept of Veg dharan.

Our Ayurvedic principles which have taken a back seat may be due to the British reign should be revived soon. Those Ayurvedic experts who are better with their pens can voice out health opinions in daily newspapers.

People start their day with newspapers. If Dincharya, Ritucharya and Vegadharan concept is presented in articles in simple and lucid manner as a layman can understand, they will be able to follow what Ayurved is and what they can do on their part as per Ayurved.

We see numerous cookery shows on televisions in most of the languages. One such show should feature an Ayurvedic nutrition expert providing tips on healthy cooking. That healthy eating and avoiding viruddha ahar will combat 50% of the diseases should be imbibed in the minds of housewives as well as children. For example, the fact that we should consume more and more unctuous food items like cowghee, milk, and other milk products, sweet meats, dry fruits and bhakri made of bajri in the Hindu month Hemant i.e. November-December should be propagated in these cookery shows.

When we talk about Ayurved in our country, one cannot forget the name of eminent Ayurvedic practitioners who have been advising people about Ayurved

on national television since number of years. One of them has even established a pharmacy under his surveillance. This ensures that the drugs manufactured over there are of better quality with no adulteration. He suggests remedies about disorders asked to him through chat shows and magazines. In his chat shows, many people also share their own experiences wherein they get rid of a particular disorder due to his medicines. In his chat shows, a wide range of topics pertaining to Ayurved are discussed-immunity boosting, prevention of diseases, cosmetology, Yog abhyas, diet, basic medicines and even Dincharya, Rutiucharya and the vegadharan concept. When such initiatives will continue to be taken, Ayurved is sure to flourish in not only our country but also over the world.

Many diseases like hypertension, paralysis, RA, diabetes which do not have a sure shot cure in modern medicine. But Ayurved can prove to be fruitful in such cases. Ayurvedic medicine and diet regime if followed strictly can work wonders.

In addition to all these ways, one more way of propagation of Ayurvedic medicines is undertaken by some. The agents travel in train compartments, buses or in local crowded areas to distribute pamphlets of advertisements of Ayurvedic clinics and Ayurvedic medicines for ailments like headache, joint pains, piles, acidity and obesity.

Also, another venture that can be undertaken is of public rallies. Slogans of sutra from Ayurvedic literature with their meanings can be publicly demonstrated. Such live rallies receive a great response generally.

Ayurvedic doctors who have passed out from their schools can return back to the schools once in a while. Not for learning but for holding small workshops for the school children in order to educate them



about Ayurvedic habits. This will inculcate healthy habits in them in such a tender age itself.

Thus, we have seen various ways in which Ayurved is being promoted and in which it can be promoted even more.

Television has the plus point that it is one of the most leading social media. It is a privilege to visualize something that is millions of kilometers away from us and that too live. People who cannot read and hear can understand television. But television impacts the society in a negative way when improper ideas like violence are displayed. Watching television can cause a lot of time waste unknowingly.

Newspaper is also a good medium as it is read by a majority of the society especially by the senior citizens. But it fails to spread knowledge in those who are illiterate.

Almost all the youngsters of our country are netizens. Surfing is a common hobby for all of them in search of necessary information but only when the matter searched for is really worth knowing. Mere surfing the social networking sites is not helpful in terms of gaining knowledge.

But this bane can be converted to boon if a page devoted to Ayurved alone is established by authentic experts on a leading social networking site.

In addition to this, an individual television channel for Ayurved if established, then it would be surely beneficial.

Smart phones are a household commodity nowadays. On that if an application is started for Ayurved then it can serve the public to a great extent. But the rights and management regarding the application should lie with expert and trained Ayurvedic practitioners alone and not with students.

If an agency with qualified Ayurvedic doctors is started and a toll-free calling system is started then even this would answer the queries of many people.

All this will be possible when Ayurvedic doctors will start to serve the masses before people come to their resort.

Surely such measures will help to clear the age old misconception from the minds of common people that Ayurvedic medicine just means 'jadibooti' of a sage from a forest.

