



“A Scientific Review on Role of Aayurveda Aahara Dravyas In Geriatric Population”

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Abstract: - Geriatric population is an Old age population of society. Due to increase in overall life expectancy the number of Geriatric population is increasing day by day in whole world. Elderly people are malnourished due to age related systemic changes. And it becomes a major health challenge to provide a good well balanced & nutritious food to them. In Aayurveda Old age is referred to Vrudhha or Jaravastha. “Jara” is one of important branch of Ashtang Aayurveda likewise Geriatrics in modern medicine. Bal-Dhatu-Endiya karya and Ojakshya is present is Jatavastha. Bhrunhana and santarpana Aahar can be helpful to come out from this condition. From Aayurveda texts such type of Aahariya Dravyas are chosen from Shook, Shami, Shak, Phal, Mansa, Goras, Harit, Aahar Yoni and Bhakshya Vargas. Various Aahar kalpnas/Food variants can be prepared with help of these Dravyas like, Odana, Rasala, Leha and many more. This will help to limit the further damage and become helpful to prevent many diseases occurring in Old age. So the elderly people can live happily. The detailed description about Aahar Dravya and Aahar Kalpana with its mode of action in Jara/Vrudhhavastha will be explained in full paper.

Keywords- Geriatric, Jara, Vrudhhavastha, Brunhana, Santarpana, Aahar Dravyas and Aahar kalpana.

Introduction: -Aayurveda is the natural system of medicine. Ayurveda provides a treatment modality through Prevention, Maintenance and Promotion of health with use of proper and well balanced diet i.e. Aaharkalpana or Food. Food provides not only the essential nutrients for body but also other bioactive compounds for healthy life. Food is vital breath of living beings. The life, happiness, complexion, strength and intellect all are dependent on food⁽¹⁾.

Jara is one of important branch of Ashtang Aayurveda likewise Geriatrics in modern medicine⁽²⁾. Older people are the valuable resource for any society. Ageing is the natural phenomenon. Becoming old is called as Elderly. Improvement in health care services increases the life expectancy and results in increase number of elderly population. It is a major health care challenge throughout the World to take care of an elderly or geriatric population. Geriatric is a branch of medicine that deals with the problems and diseases of Old age and the medical care of aging people. Although the exact definition of Elderly age group is controversial, it is defined as a person with a chronological age of 65 years and above⁽³⁾. There is a steady increase in population of elderly in India with 8.6 % above age of 60 as per 2011 Census which is projected to over 10 % by 2020 can reach up to 149.7 million.

Aayurveda has given seven types of diseases. SvabhavBalpravrutta Vyadhi is one of them. These are the naturally occurring conditions which are unavoidable. Jara/Old age is one of a Svabhav Balpravrutta/naturally occurring disease⁽⁴⁾. Acharya Sushruta has define Vrudhhavastha/Old age as person above 70 years of age , whose strength Dhatu,Endriya, Bal, Varna gets decline day by day and who is incapable of doing anything is Vrudhha.⁽⁵⁾

Being old is a natural phenomenon where VatVrudhhi and Dhatukshya is mainly present. To maintain the balance in bodily systems of Elderly needs a multifaceted approach which mainly incorporate the diet and nutrition. Aaharkalpana explained in Aayurveda literature has its great importance in maintenance and prevention of diseases in Geriatric population also. So here tried to compile the suitable food/Aahar Dravyas and their Kalpana for elderly from Aayurveda texts.

Aim: - “To review Aayurveda Literature for Role of Aahar Dravyas and their different Kalpana/ Dietary regimen in Geriatric Population.

Objectives:-

- 1) To study and understand the modern and Ayurvedic concepts of Geriatrics and Vrudhhavastha .
- 2) To find the possible principle of Diet application/ Aahar Dravyas and different Kalpana for Geriatric Population/ Vrudhhavastha by reviewing Ayurveda literature.
- 3) To find the role of Aahariy Dravyas and its probable mode of action in Geriatric population/ Vrudhhavastha.

Material & Methods:- Classical text books of Ayuurveda, Modern textbooks and research work available related to topic from authentic sources of internet.

- 1) Charak Samhita
- 2) Sushruta Samhita
- 3) Ashtanghudaya Samhita
- 4) Sharangdhara Samhita.
- 5) Madhav Nidana
- 6) Yogratnakara
- 7) API text book of Medicine.
- 8) Scholarly articles from authentic sources of internet.

Observations & Discussion: -

1] Geriatric Population and Malnourishment- To lead healthy and active life human being need a quality food. Nutrition reach food is derived from well-balanced diet. Nutritional deficiency is very common in Elderly. Over 60% of elderly people are malnourished ⁽⁶⁾. Nutrition is an important element of health among the elderly & it affects the whole process of aging. Regular diagnosis of malnutrition is increasing in elderly & it increases need for more education regarding nutritional status of old people.

The exact age of elderly is hard to define because the concept of old is changes in different societies. In India “National policy on older persons” in January 1999 defines the senior citizen or elderly as person who is 60 yrs. of age or above ⁽⁷⁾.

Nutrition is important determinant of health in elderly and food is the main source of nutrients.

Nutrition & Age related changes ⁽⁷⁾:-

- I. Gastrointestinal system:** elderly people often complained of loss of both smell and taste. It is may be due to progressive loss of number of taste buds per papilla on the tongue. Taste buds detect bitter and sour taste shows relative increase with ageing. It results in the impaired appetite which leads to less affinity towards food and develops malnutrition. Decreased production of saliva leads to slow peristalsis & it takes time to digest food & may causes constipation. There is decreased secretion of gastric acid which limits the absorption of Iron & B12 in gut.
- II. Weight loss in elderly:** Low intake of food causes low nutritional status can causes weight loss.
 - a) Wasting:- due to poor dietary food intake – involuntary loss of weight happens.
 - b) Cachexia:- due to increased rate of catabolism involuntary loss of body cell mass occurs & results changes in body composition.
 - c) Sarcopenia:-age related physiological decline in skeletal muscle mass leads to weight loss. low mineral content diet leads to decreased in Vit.D & causes more osteoporosis in elderly.
- III. Renal system:-** due to ageing there is progressive loss of kidney cell mass. It decreases the rate of filtration , elasticity& muscle tone and capacity of bladder is also decreased. It results in renal impairment and reabsorption of nutrients again in body fluids. It also affect the vit.D metabolism and results in reduction of vit.D levels contributes to osteoporosis in elderly.
- IV. Nervous system:** risk of cognitive decline increases in advance age. Vit.B12, B6 & Folate deficiency are associated with cognitive impairment. This malnutrition condition increases the risk of development of vascular diseases like CVA.
- V. Immune system:** malnutrition leads to formation of weak immune system. So elderly people become more prone to various infections & it causes increase number of morbidity in elderly.

2] Complications Of Malnutrition In Elderly:-

Due to poor dietary habits, under nutritious diet elderly are more prone to muscle weakness, decreased muscle tone, less vit.D3 and Calcium reabsorption leads to osteoporosis & fracture on fall. Anorexia results in less affinity towards food. Nutritional deficiency Anemia develops due to less absorption of B12, Iron & Folate. Cognitive impairment causes the increased risk of development of CVA.

Well Balanced & Nutrients Loaded Diet for Elderly:- like for other human beings elderly needs special attention towards diet. The diet should be protein rich & of must contain carbohydrate, fat, fiber, vitamins & mineral rich of B12 , calcium, & vit.D3. It helps to decrease the above stated complication in elderly patients.

3] Aayurveda correlation of Vrudhhavastha and Geriatrics:-

- I. **Vrudhha/ Jaravastha**-After the age of 70 years there is decline in the Dhatu, Endriya-Bala, Varna, Virya and Utsaha. Person become bald, has gray hairs, suffers from Swas-kasa Vyadhi and become incapable of even doing daily routine activities. The state is called as Vrudhhavastha. Vrudhha /old age person collapses same like a collapse of old house⁽⁵⁾. It is also called as Jaravastha.
- II. **Jarashosha**⁽⁸⁾ -In the chapter of Shoshpratishedhadyaya Aacahrya Shushruta has explained the Jarashosha which is very similar to Vrudhhavastha . The person in Jarashosha become devastated, sluggish in Oja, Budhhi, weaken in strength & Endriyashakti. Body tremors, dry cough, tastelessness, un willfulness for any type of a work, secretions from Mukh, Nasa, Netra, Rukshata and reduced complexion is also present.
- III. **Ojakshaya**⁽⁹⁾ -The Ojakshaya in Vrudhhavastha is due to the Anuloma Dhatukshaya of all sapta-Dhatu. When the Oja is diminished ,the person is fearful, weak, always worried, having disorders in sense organs, deranged luster & mental ability, rough and emaciated. This condition is also very similar and present in Vrudhhavastha.

2] Aayurveda principle of Geriatric/ Jaravastha treatment & Care:- Though Jara is a special branch of Ashtang Aayurveda, the separate description is very scattered & in discrete manner in Aayurveda literature. When we look for the Principle of treatment and Aahar can be used in Vrudhhavastha following considerations have to be made.

- I. **Santarpana**⁽¹⁰⁾-Principle of ‘Santarpana’ can be used as Vrudhhavastha is an one of indication of Santarpan Chikitsa . Santarpana is also called Brunhana.
- II. **Vata dosha Chikitsa**⁽¹¹⁾- Jara is a tear down stage of human life & there is increase in Vata dosha naturally. Swadu, Amla and Lavan Rasapradhan Bhojan/food is advised to treat the vitiated Vata dosha.
- III. **Ojakshay Chikitsa**⁽¹²⁾- Increase in Oja leads to increase in Utsaha and Bala/ enthusiasm and body strength.

So basically Dravyas having Brunhana properties can be used in Geriatrics. For the present study we are considering the Aahar dravyas and their various Kalpana from Aayurveda in Jaravastha. If righteous food will be taken , it will delay the Jaravastha and also help to maintain the Jaravastha. So on the basis of above principles ,we here tried to compile the Aahar Dravyas and their Kalpana for Vrudhhavastha/Geriatrics.

4] Table No.01⁽¹³⁾

Aayurveda Aahariya dravyas suitable for Vrudhhavastha/Geriatrics- Only Pathyakar or Dravyas which are suitable & can be useful are considered here. Apathy or unsuitable are not considered here.

Group of Food Substance/Aahar Varga	Name of Food Substance/Name of Aahariy Dravya	Properties of Food Substance/ Gun Karma of Aahariy dravya
Shookdhanya Varga (Grains) (Ch.Su.27) Or Shali Varga (Shu.Su.46)	Shashtik Shali (Type of Rice)	Shit, Madhur, Asnhigdha, Guru, Tridoshagna. Promotes stability, gives strength.
	Godhum (Wheat)	Madhur,Shit, Snigdha,Jivaniy, Brhunhaniya, Vrushya, provide stability.
Shamidhanya	Mudga(Green gram)	Kashay, Madhur, Shit,Laghu. Best in all Shamidhanya/lentils
	Masha(Black gram lentil)	Vrushya, ParamVatahar, Snhigdha, Ushna,

Varga (Lentils) (Ch.Su.27) Shamidhanya Varga (Shu.Su.46)		Guru,Balya.
	Masoor (lentil)	Kashay, Madhur, Guru,Sangrahi, Ruksha, Badhvarchas.
Mamsa Varga(Meat) (Ch.Su.27) (Shu.Su.46)	Lava(Common quail)	Laghu,grahi,Agnidipak, Kaphavikarhar
	Mayur(Peacock)	Very good for Netra,Shotra, Medha, Agni, Vaya, Bala, Swara, Aayu.
	Barhi(Swan)	Vataghna, Guru, Ushna, Madhur,Brunhana, Vatahara, Shukrala best to increase- Varna & Bala
	Tittir(Partridge)	Laghu,Ushan, Agnivardhan, Tridosahra.
	Kapingala(Grey Partridge)	Madhur, Shit, Laghu, Pittakaphavikaranut.
	Kukkut(Cock)	Ushna, Swedakar, Ashingda, Vatahar Vrushya, Brunhana.
	Chataka(Sparrow)	Madhur,Snigdha, Bal- ShukraVardhana,Laghu, Dipan.
	Chhag(Goat)	Guru shit, Natishit, best in all meat.
	Ena(Black buck)	Madhur, Shit,Tridosahar, Laghu,Mutral.
	Mastya(Fish)	Snigdha, Vrushya, Guru,Ushna, Madhur.
	Kurma(Tortoise)	Varna, Vathara, Vrushya, Chakshushya, Balvardhan, Medha-Smrutikara.
	Majja(Bone marrow)	Madhur,brunhana, Vrushya, Balya.
Shak Varga (Vegetables) (Ch.Su.27) (Shu.Su.46)	Tanduliyak(Amaranth leaves)	Madhur, Ruksha, Madhurpaki. Mada&Vishahara.
	Pakva Kushmanda(Ripe Pumpkin)	Madhur,amla, Laghu, Sarvadhoshahar.
	Kamal beej(Fox Nut)	Madhur, Guru.
	Vartak (Brinjal)	Shit,Madhur, kaphapitta vardhak.
Phal Varga(Fruits) (Ch.Su.27) (Shu.Su.46)	Mrudvika(Grapes)	Madhur,Snigdha,Shit, Brunhana, Vrushya, Vatapittahar.
	Kharjur(Dates)	Madhur, Guru,Shit, Brunhana, Vrushya, Vatapitta-Kshaya-har.
	Falgu(Fig)	Gu ru,Shit, tarpan, Brunhana.
	Tal(Ice apple)	Snigdha, Shit,Madhur,Brunhabna, Balya
	Narikel(coconut)	Snigdha, Shit,Madhur,Brunhabna, Balya
	Bhavya/Aalubukhara(Plum)	Madhur,Amla, Guru,Shit, Vaktra-Shodhana.
	Pakva kapitha(ripen Wood apple)	Madhur,Amla,Kashay,Guru, Sugandhi, Ruchikar,Vishaghna& Doshaghna.
	Pakva badar(Ripe Jujube)	Madhur,Snigdha, Vata-Pittahar.
Pakva Aamra(Ripe Mango)	Snigdha, Guru,Ushna, Vataghna, Mansa- Bala-Shukra-Pradam.	

	Dadim(Pomegranate)	Snigdha, Ushna, Hrudyā.
	Vatam(Almon) and other dry fruits	Guru,Ushna,Snigdha,Madhur,Balaprad.
	Priyal(Almond Flavored dry fruit)	Guru,Shit,Snigdha,Madhur,Vatagghna, Brinhana,Vrushya.
	Narang(Orange)	Madhur,amla, Vatahar, Hrudyā,Ruchikar.
Harit Varga(Salads) (Ch.Su.27)	Aardrak (Ginger)	Rochan, Dipan, Vata Kaphahar.
	Jambir (Type of Lemon)	Rochan, Dipan, Kapha-vata hara,Ushna, Pachan.
	Surasa/Tulasi (Basil)	Kaphavatahara.
	Bal Mulak (Young Radhish)	Doshahara, Ruksha.
	Yavani (Carom seeds)	Ushna, Tiksha, Dipan.Bhedana, Kaphavatahara.
	Dhanyaka (Coriander)	Katu,Ushna, Rochan
	Palandu(Onion)	Guru, Rochan, Balya, Vatahar, Kaphakar, Pittahar,Vrushya,Balya.
	Lahasuna (Garlik)	Ashingdha, Ushna, Guru, Vatahara,Vrushya.
Goras Varga(Milk & Milk Products) (Ch.Su.27) (Shu.Su.45)	Godugdha (Cow milk)	Madhur,Guru,shit, Ashigdha,Rasayan, Ojovardhak, Param-Jivaniya
	Chhag Dugdhd (Goat milk)	Kashay,Laghu. Kshaya-Kasahar.
	Go Navanit(Fresh Cow Butter)	Grahi,Dipan, Hrudyā, Ruchikar.
	Go-Gruta(Cow Ghee)	Shit, Madhur, Vata-Pitta-Vishahara,Smruti-Budhhi-Agni-Shukra-Oja-kapha-Med-Vrudhhikar.
Ekshu Varga (Sugarcane its product) (Ch.Su.27)	Ekshu(Sugarcane)	Madhur,Shit,sara,snigdha,Brunhana,Vrushya.
	Sharkar(Sugar)	Snigdha,Shit, Vrushya.
	Gud (Jaggery)	Snigdha,Ushna,Brunhana.
	Vishwabheshaj (Dry Ginger)	Dipan, Pachan, Ushna,

Aahar Yoni Varga/group of adjuvant of Food (Ch.Su.27) (Shu.Su.45)		Vatakaphahara, Madhur, Vrushya.
	Shushka Pippali(dry long paper)	Kashya, Ushna, Dipan, kaphavatahara.
	Ajajai/Jira(cumin Seeds)	Rochan dipan, Vat-kaphahar,
	Marich(Black paper)	Ushna, Tikshan, Dipan, Chhedan, Kaphvatajit.
	Hingu (Asafoitida)	Katu, Ushana, Dipan, Laghu, Pachan, Rochan, Vatashleshma Vibandhahar.
	Saindav lavan (rock salt)	Rochan, Dipan.
	Erand tail (Castor Oil)	Sukshma, Ushna, Guru, Vatahar, anuloman.
	Til tail (Sesamum Oil)	Madhur-Kashay, Ushna, Vyavayi, best Vatahara, Balya, tvachya, Medha-Agni-Vardhanam.

5] Role of Aahariy Dravyas and its Probable Mode of action in Vrudhhavastha/Geriatric Population:- The principle behind the diet in Geriatric population is- It should be having Brunhan Properties but should not increase the Vata Dosha. All these food items listed here has Madhur, Snigdha, Balya, Vrushya, Varnyakar and Ojovrudhhikar properties. Also it has some kind of Dipan, Pachan, Ruchikar and Vatahar properties. So they will make a Brunhan without hampering the Jatharagni. It will reduce Vata Dosha, increase Jatharagni & give Bala/strength to the body which is actually needed in Vrudhhavastha or Geriatrics.

6] Some Aahar kalpana/Food Variants suitable in Vrudhhavastha/Geriatrics:- Charak, Shushruta, Vagbhata Acharya has described the various Aahar kalpana i.e. different forms of food in **Krutana Varga/dietary preparations**. Kruta means the 'Spiced Food'. Sharangdhara has described the process of making these Aahar kalpana. These are as follows.

- I. Manda, Peya, Vilepi and Yusha/Liquid gruel water or gruel⁽¹⁴⁾-** When rice is cooked with a specific proportion of water and only water or liquid contains some portion of rice is considered is called referred as these different gruels. All these are having Agnidipan, Swedajanan and Laghu properties ⁽¹⁵⁾. So when Vrudhhas are suffered from Mandagni these preparations can be useful.
- II. Bhakta or Odana⁽¹⁶⁾-** When 16 Pala rice is cooked with 14 times of water and excess water is drained the only boiled rice is called Bhakt or Odana. It is heavier/Guru than above said preparations. It is Guru & Balprad. When this Odana is cooked with Mansa, shak, Vasa, tail, Ghruta, Majja or Fal it become Balya, bhrunhaniya, Hrudyta and Santarpaniya. Similar are those prepared with Masha, Til, Ksheera, Mudga. So very useful in Jaravastha.
- III. Rasala⁽¹⁷⁾-** Rasala is Snigdha, Balya, Ruchikar, Bhrunhana and Vrushya.
- IV. Sagud-Dadhi⁽¹⁸⁾-** Dadhi when taken with Guda is Snigdha, Balya, Ruchikar, Bhrunhana and Vrushya.

- V. **Veshavara**⁽¹⁹⁾- Boneless spice cooked meat is Guru, Snigdha, Bala-Upachaya-varadhana.
- VI. **Leha**⁽²⁰⁾- Leha/Sugary preparations when made with fruits like Aamra,Aamlaki it becomes Rochan, Tarpana Bhrunhana and Balvardhana.

7] Bhakshya Varga/Eatable group:- Aacharya Shushruta has given some eatable preparations separately. Some of them can be used in Geriatrics. These are as follows.

- I. **Ksheer-Krut Bhakshay**⁽²¹⁾- When Godhum or Shali like aahar Dravyas are cooked with Ksheer , it become Balya, Vrushya Dipan & Hrudyas.
- II. **Ghrutapur**⁽²²⁾- Food prepared with Ksheer, Narikel,Sharkara has Vatahar, Vrushya, Rakta-Mansavardhak and Hrudyas properties..
- III. **Gaudika**⁽²³⁾- Food prepared with Gud become Guru, Vatahar, kaphavardhak, Brunhana and Shukral.
- IV. **Gruta-pachit aahar**⁽²⁴⁾- Food prepared in Ghruta is Hrudyas, Vatapittahara, Balya,Varnyas.
- V. **Fal-Mansa-Kruta Bhakshya**⁽²⁵⁾- When food is cooked with Fal-rasa like Ekshurasa or Mansa & Til,Masha; it become Balya,Guru, Brunhana & Hrudyas.

Conclusion:- Jara is one of important branch of Ashtang Aayurveda likewise Geriatrics in modern medicine. Jara is a Svabhavbal-Pravrutta Vyadhi which is naturally occurring and unavoidable stage of life. Become old is legitimate phenomenon. Malnourishment is a major health hazard in elderly due to age related systemic changes.

According to Aayurveda, Jaravastha is devastating stage of all type of body strengths i.e. Bal-Endriya-Ojakshya. There is increase in Vata Dosha also. So we have to apply the Principle of Santarpana or Brunhana for the management of Vrudhha/Jaravastha. The superlative stage of once strength/Bal-Varna-Oja is very dependent on the Aahar or food. In this article we have compiled the Aayurveda Aahariya Dravyas and their various kalpana which are Brunhana in nature. Manda,Peya,Vilepi and Yusha are Dipan & Laghu , so can be used when elderly are suffering from Jatharagnimandya. Remaining are Rasala,Veshavar, Leha and other Bhakshya kalpana prepared from various Aahariya Dravyas are Brunhana ; so gives strength & increases Bal-Varna-Dhatu-Oja in Vrudhhavastha. It will prevent the further tear of body and can help to prevent many disease of Geriatric condition. The different permutation combination of the Aahar Dravyas can be used to prepare these Aahar Kalpana. We have to encourage the elderly & their relatives to consume and serve these Aahar kalpana, so they can postponed or maintain the Vrudhhavastha or Geriatric stage of their life manageable, disease free and happy. These Aahariya kalpana surely help elderly **“To Add Life to Years and Not Years to Life”**.

Further Scope Of Study:- Aahar kalpana from Charak,Shushruta and Vagbhata Samhitas are reviewed here only. Researchers can explore Bhavaprakasha, Yogratnakar, Rajnighantu for more Aahar Dravyas. These Aahariya Dravyas can be evaluated for Macro and Micronutrients, so it will be easy to choose as per the deficiencies in Geriatrics. New Aahariya dravyas which are not mentioned in Aayurveda Samhitas before, should be evaluated for their Guna, Karma and applications with the help of a modern techniques. There is a wide range of scope for clinical research to prove the utility of different permutation combination of these Aahariya Dravyas in Geriatric population.

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Abbreviation:-

- 1) Ch. Su.- Charak Sutrasthana
- 2) Shu. Su.- Sushrut Sutrasthana
- 3) Ash. Hru. Su.- Ashtang Hrudaya Sutrasthana