

## AYURVEDIC REVIEW ON JARA AND ITS MANAGEMENT THROUGH CLASSICAL APPROACH

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### ABSTRACT

**Introduction:** *Ayurveda* has explained about longevity and vitality in terms of *Jara Chikitsa* and *Rasayana*. Ageing in Modern Science is defined as a progressive degeneration of the body. *Jara* is a natural phenomenon and one who is born is bound to experience it specially after sixth decade of life. *Chakrapani* in his '*Bhanumati*' commentary on *Sushruta Samhita* said that it is the definite stage of life which appears before death. **Aims and Objective:** To review the concept of *Jara* and to explore the preventive and treatment of *Jara* in *Ayurvedic Literature*. **Material and Methods:** Material pertaining to *jara* available in the *Ayurvedic* Classical Literature—*Brihatrayi*, *Laghutrayi*, and in the Internet were thoroughly screened, compiled, analyzed and

presented in a systemic manner. **Discussion:** All the classical texts described *Jara* as a factor dependent on *Kala*, which was even agreed by Modern Scientist. *Jara* is describe as a progressive loss of adaptability with passage of time so that individual is less and less able to react abruptly to challenges from the external or internal environment. Although no treatment is available which can be prevent *Jara* but it can be delayed and managed by *Rasayana*. **Conclusion:** *Chikitsa* of *Jara* includes programming of lifestyle in such a way that *Akalaja Jara* can be avoided and *Kalaja Jara* can be delayed with different measures like diet in proper quality, *Dincharya*, *Ratricharya*, *Sadvrittupalana*, *Achar Rasayana*, *Dharneeya* and *Adharaneeya vega*, *Practice of Yoga*, *Rasayana drug* and *Sodhana* therapy etc together show promising outcome.

**KEYWORDS:** *Akalaja Jara, Stress, Sattvavayaya chikitsa, Panchkarma.*

## INTRODUCTION

Ayurveda considers life (*Ayu*) as the continuum of infinite consciousness manifesting in four dimensions—*Shariri* (body), *Indriya* (senses), *Satva* (mind) and *Atma* (soul). Existence is not possible in the absence of any of these four components. A dynamic harmony of the four constituents is called *Swasthya* or Total Health.

शरीरेन्द्रियसत्त्वात्मसंयोगो धारि जीवितम्।

नित्यगश्वानुबन्धश्च पर्यायैरायुरुच्यते।।

(Ch.Su.1/42)

वेदं चोपदिश्यायुर्वार्यः तत्रायुश्चेतनानुवृत्तिर्जीवितमनुबन्धो धारि चेत्येकोऽर्थः।।

(Ch.Su.30/22)

*Ayu* has the following characteristics (also synonyms of *Ayu*).

i. **Chetanuvritti** - Continuation of consciousness.

ii. **Jivitam**- जीवयति प्राणन् धायतीति जीवितम्।(Chakrapani on Ch. Su. 1/42)

*Ayu* is synonymed as *Jivitam* as it keeps the body healthy and alive by acquiring proper nourishment, resulting in steadiness of body functions.

iii. **Dhari**- धारयति भारीरं पूतितां गन्तुं न ददाति इति धारि। (Chakrapani on Ch. Su 1/42)

Life supports the body and stops it from undergoing decomposition, so it is called *Dhari*.

iv. **Nityaga** - नित्यं भारीरस्य क्षणिकत्वेन गच्छतीति नित्यगम्। (Chakrapani on Ch. Su. 1/42)

Normal functions of the body slow down during the course of life, eventually leading to death, so it is called *Nityaga*.

v. **Anubandha**- *Ayu* transmit from one body to other (in *pramanu* form), so it is called *Anubandha*.

## DEFINITION OF VAYA

1. वयते वेति अजतीति वा (S.K.D)

2. वयस्तश्चेति कालप्रमाणविशापेक्षिणी हि भारीरावस्था वयोऽभिधीयते। (Ch.Vi.8/122)

3. कालकृत भारीरावस्था वयः (Arun dutta on A. H. Sa. 3/10)

*Ayu / Vaya* is defined as time bound changes occurring continuously in the body which never stops and it is dependent only on *kala pramana vishesha*.

## CLASSIFICATION OF VAYA

Counting the chronological age from the time of birth, *Ayurvedic* texts divide human life span into three categories –

**Balya, Madhya and Vriddha**

But there is some difference of opinion regarding different milestones amongst ancient scholars which is summarized below:-

<i>Vaya</i>	<i>Charaka</i>	<i>Sushruta</i>	<i>Kashyapa</i>	<i>Harita</i>	<i>Vagbhatta</i>
<i>Garbha</i>	-	-	Foetal life	-	-
<i>Balya</i>	Upto 30yrs.	Upto 16yrs.	Upto 1 yr	Upto 16yrs.	Upto 34yrs.
<i>Kumara</i>	-	-	1 to 16yrs	-	-
<i>Yuvana</i>	-	-	16 to 34yrs.	16 to 25yrs.	
<i>Madhyama</i>	30 to 60yrs	16 to 70 yrs	34 to 70yrs	25 to 70yrs	34 to 70yrs.
<i>Vriddha</i>	>60yrs.	>70yrs.	>70 yrs.	>70yrs.	>70 yrs.

(Ch.Vi.8/122, Su.Su.35/34, K.S.Bh.71- 76, Harita Prathan sthan 5/1-6, A.S.Sa. 8/20, A.H.Sh.3/ 105)

**1. BALYA**

The period of infancy and childhood is *Balya*. Authors of classical texts have not counted the period of life from conception till birth as a period of ageing due to absence of complete human form in embryological period (*Bhrunavastha*).

*Sushruta* has further classified *Balyavastha* into – (*Su.Su. 35/34*).

1. ***Ksheerpa*** – It is upto 1 year wherein only milk is fed to child
  2. ***Ksheerannada*** – It is upto 2 years where light solid food, is given along with milk.
  3. ***Annada***–It is from 2 years to 16 years where solid food is given .This classification is purely based on the gradual adaptation of child's digestive system to normal adult food.
- The same criteria was followed in *Kashyapa Samhita* to scale the period of child's years.

*Balayavastha* is subdivided on qualitative grounds into following two periods taking into consideration the status of *Dhatu* and *Bala* with constitutional faculties. (*Ch.Vi.8/122*).

**1. 1 to 16 yrs are considered under-developed period**

तत्र बालमपरिपक्वधातुमजातव्यजनं सुकुमारमकेशसहमसपूर्णबलं श्लेष्मधातुप्रायः ।

The child will have *Sukumarata* (tender constitution) and *Akleshasaha* (unable to bear down any stress). The *Dhatu*s are not fully formed (*Aparipakva Dhatu*) so their functions are not established to full extent (*Ajatavyanjana*).

*Vriddha Vagbhatta* added *Sneha*, *Mardava* and *Alpa Krodha* as dominant features. (*A.S.Sa. 8/22*). In addition, this period of life is dominated by activity of *Kapha dosa*.

## 2. 16 to 30 years it is the developing period.

विवर्धमानधातुगुणं पुनः प्रायेणानवस्थितसत्त्वम्

The development of *Dhatu* occurs both quantitatively and qualitatively in this phase of life but *Anavasthita Sattva* is observed. According to *Gangadhara*, commentator of *Charaka Samhita*, this stage is dominated neither by *Shleshma* nor by *Pitta*.

## 2. MADHYA

The phase of life wherein total maturity of body ensues. It runs from 30 to 60 years according to *Charaka Samhita* and from 16 to 70 years according to *Sushruta Samhita*.

*Sushruta* classified this phase into further four sub phases:- (*Su.Su.35/35*)

1. **Vridhhi**—from 16 to 20 years—development of *Dhatu* takes place in this period. *Ashtang Samgraha* added few more characteristics such as *Diptagni* (good digestive capacity), *Paripaka* (profound metabolic activity), *Prajnad-hikya* (increasing capacity of judgment) and *Vyavasaya* (wide field of interest/ activities).
2. **Yauvana**—from 20 to 30 years—This is the period of further development. *Chakrapani* states that *Yauvana* is the period where in the amalgamation of features of preceding *Vridhhi* phase and succeeding *Purna* phase is seen but maturation of body is still incomplete.
3. **Sampurna** – from 30- 40 years – This is a period of complete physiological and psychological maturation.
4. **Hani or Parihani** – from 40- 70 yrs.—After 40yrs, declination process starts.

Characteristics of *Madhyama Vaya* given in classics are -- concurrent appearance of proper strength, virility, valour, courageousness, cognition (grasping power), retention, recollection, knowledge and best qualities of *Dhatu*. There will be stability of body and mind. Moreover, this phase is dominated by activity of *Pitta*. (*Ch.Vi.8/122*)

From the above discussion, one can say that *Vardhakya* ensues after the age of 70 yrs as mentioned in *Sushruta Samhita*. This is relatively nearer to *Charaka Samhita*'s opinion as decrement of body function takes place in the later half of *Madhyamavastha* or at least, initiation of the same (*Hani*) occurs around 60 yrs. So is certain that *Vriddhavastha* occurs after 70 years.

### 3. VRIDDHA

This is the last phase of *Vaya* having synonyms like *Vardhakya*, *Jara* from wherein gradual degradation of physical and mental faculties gears up. *Jaraavastha* has been compared in the classics with an old mud house that gets crumbled easily in pouring rain water. According to *Sushruta Samhita*, day to day decrement in *Dhatu* occurs after 70 years of age. Functions of sensory and motor system slows down with decreased strength, virility, enthusiasm associated with wrinkles, graying, baldness. One manifest frequent attacks of cough, breathlessness etc. and is not able to do his routine work. (*Su.Su. 35/29*)

*Charaka Samhita* added declination of mental faculties along with physical faculties like reduction in capacity of perception, retention, recollection, speech and knowledge. *Vayu* dominates in this phase. (*Ch.Vi.8/122*)

*Vagbhatta* further added that this phase of life is accompanied with tremors and reduced digestive capacity. (*A.S.Sa.8/24*)

Somatic and mental changes that occur during old age are clearly distinguished by authors of different classical texts.

Somatic variations include *Twak Parushya*, *Slatha Sara*, *Slatha Mamsa*, *Slatha Sandhi*, *Slatha Asthi*, *Dhatu Kshaya*, *Indriya hani*, *Prabha hani*, *Agnisada*, *Kayasya Avanamana*, *Vepathu*, *Khalitya*, *Vali*, *Palitya*, *Kasa* and *Swasa*.

Mental variations include *Grahana*, *Dharana*, *Smarana*, *Vachana* and *Vijnana hani* along with *Paurusa- Parikrama* and *Utsaha Kshaya*.

### CONCEPT OF JARA

#### ETYMOLOGY OF JARA

*Jara* is a natural phenomenon and one who is born is bound to experience it specially after sixth decade of life. *Chakrapani* in his '*Bhanumati*' commentary on *Sushruta Samhita* said that it is the definite stage of life which appears before death.

- ❖ The term "*Jara*" has been derived from Sanskrit word "जृश व्योहनौ" which means loss in period of life span. (*Panini's Sanskrit*)
- ❖ "जीर्यति इति जरा" - It is a process of becoming old by the act of wearing out (*Shabdastoma*)

## SYNONYMA OF JARA

❖ स्थाविरम् तु वृद्धवतमवृद्धासंगेऽपिवर्धकम् ।। (Amarkosham 2/6/40)

❖ प्रवयः स्थविरोवृद्धोजीर्णेजरानपि । (Amarkosham 2/6/42)

1. स्थाविरम् - incapacity or impairment of the movement of the aged persons.
2. विसन्सा - degradation of the body/ *sharir*.
3. प्रवयः - elapsing of years after the birth.
4. वृद्धा - fully matured person.
5. जीर्ण
6. जरा
7. जरति
8. जया - completely grown individual.
9. वरिष्ठ - senior or fully mature.
10. निष्फला - incapable of any productive work.

## DEFINITION OF JARA

1. परं हीयमानधात्विन्द्रियबलवीर्यपौरुषपराक्रम ग्रहण धारण स्मरण वचन

विज्ञानं भ्रष्टमान धातुगुणं वायुधातुप्रायं क्रमेण जीर्णमुच्यते आवर्षशतम् ।। (Ch.Vi.8/122)

As the person enters the 6<sup>th</sup> decade of life, there is gradual diminution of *Dhatus*, decreased perception and strength of sensory and motor system, decreased energy, manhood, valour, understanding, retention power, memory, speech and power of discrimination. Disintegration of *Dhatus* occur due to predominance of *Vata* and there is gradual wearing down till the age of hundred years.

There is diminution of some psychological features as evident below:-

ग्लायति सीदति निद्रातन्द्रालस्य समन्वितो निरुत्साहः श्वसिति असमर्थ

चेष्टानां शारीर मानसीनां नष्टस्मृति बुद्धिच्छायो रोगाणामधिष्ठान भूतो न सर्वमायुरवाप्नोति । (Ch.Chi.1/2/3)

A person feels exhausted, weak, sleepy, drowsy and lazy. .He is incapable of performing physical and mental work with enthusiasm and zeal as he loses vigor and vitality. His memory, intellect and complexion is gradually lost and he becomes an abode of diseases. Thus he cannot enjoy this last phase of his life.

## 2. According to *Sushruta Samhita*, *Jara* is defined as

सप्ततेरुर्ध्वं क्षीयमाणधात्विन्द्रियबलवीर्योत्साहमहन्यहनि वलीपलितखालित्यजुष्टं कास वासप्रभृतिरुपद्रवैरभिभूयमानं सर्वक्रियास्वसमर्थ जीर्णागारमिवाभिवृष्टमवसीदन्तं वृद्धमाचक्षते ।

(*Su.Su.35/36*)

After 70yrs. of age, there is qualitative and quantitative diminution of *Dhatus* & *Indriya*. *Sushruta Samhita* has further mentioned the word “*Jara Sosha*” to represent the phase of old age where excessive deterioration of *dhatus* results in emaciation. This *Jara Sosha* represents a cluster of physical and mental inabilities like emaciation, subnormal mental health, reduced sexual power, strength, ability of sense and power of speech associated with tremors and dislike for food.

जराशोषी कृशो मन्दवीर्यबुद्धिबलेन्द्रियः ।

कम्पनोऽरुचिमान् भिन्नकास्यंपात्रहतस्वरः । (*Su.Ut.41/24*)

## JARA AS DISEASE

*Jara* is one of the four *Swabhavika Vyadhis* described in *Su.Su.1/33*, where he explains that *Jara* is natural and inevitable phenomenon.

*Jara* is counted in *Swabhava Bala Pravrtta Vyadhi* (under *Adhidavikarog*) along with *kshudha* (hunger), *Pipasa* (thirst), *Nindra* (sleep) and *Mrityu* (death) (*Su.Su.24/7*). These *Swabhava Bala Pravrtta Vyadhis* are further divided into *Kalaja* and *Akalaja*, thereby categorizing *Jara* into *Kalaja* and *Akalaja Jara*.

*Jara* is mentioned as *Yapya* in *Ch.Su.25* while describing *bhava* and has considered it as “*Swabhavonispratikriyah*” i.e. *Jara* is incurable by nature so it is inevitable.

## DISEASES CAUSED AS A RESULT OF JARA

Some references regarding *Jara* reflects that either it is a cause of diseases or cause of group of symptoms. In *Roga Namavalikosh*, there is mentioned of some senile diseases.

1. *Jarajanya Klaibya* - Impotency due to old age.
2. *Jarajanya Dristimandhya* - Presbyopia.
3. *Jarajanya Buddhi Bhransha* - Climacteric dementia
4. *Jarajanya Kathinya* - Hardening of tissue /general degenerative changes.



## CLASSIFICATION OF JARA

*Jara* is classified into two types as per *Ayurvedic* classics:-

### 1. KALAJA JARA (Timely Ageing)

The manifestations of age related symptoms are reflected after sixty years of age. *Kalaja Jara* is *Pariraksana Krita* which means that it occurs at proper age even after following the daily and seasonal routine described in *Swasthavrita* and use of *Sodhana* at the proper time. However, this type of ageing is of less intensity, slow progressing and less troublesome. This is nothing but chronological ageing.

There is no cure for *Kalaja Jara*, it is *Yapya* i.e. by *Rasayana*, the ill effects of ageing can be checked and its progress can be slowed down or halted to some extent.

### 2. AKALAJA JARA (Premature ageing)

The symptoms which manifests before certain age due to various etiological factors and results in rapid ageing is called *Akalaja Jara*. *Akalaja Jara* is *Apariraksana Krita* i.e it occurs before the mentioned age due to improper diet and lifestyle and not abiding by rules of *Swasthvritta* and *Sadvritta*. This *Akalaja Jara* is of greater intensity, rapidly progressing if neglected. This is Biological Ageing. Premature ageing can be cured by direct encounter with underlying pathology.

## CAUSES OF JARA

### 1. Akalaja Jara

According to *Charaka Samhita*, the cause of premature ageing or early onset of ageing can be attributed to *Gramya Ahara Sevana* i.e. those who don't follow proper *ahara* and *vihara* fall prey to early ageing. (*Ch.Chi.1/2/3*)

*Panthah* (excessive walking or travelling), *Sheetam* (excessive cold food or spoiled food), *Kadannam* (food article devoid of *jivaniya* properties), *Vayovridha Yoshitah* (aged women), *Manasah pratikulta* (unfavourable condition of mind) are the five reasons of *Akalaja Jara* described by *Rasa Vagbhatta*. (*R.R.S 26/2*).

The indirect references in *Ayurvedic* texts for aetiology of *Akalaja Jara* can be quoted as follows, some of which play major and minor role.

- i. Genetic and Environmental factors
- ii. Psychological factors



iii. Imbalance of *tridoshas*

iv. *Ojakshaya*

**i. GENETIC AND ENVIRONMENTAL FACTORS-** *Sharir vriddhikar bhavas* and *Balavriddhikara bhava* described in *Charaka Samhita* can be considered as genetic and environmental factors responsible for ageing. Presence of these *bhavas* promote the health of individual, maintain longevity, intelligence, luster, immunity and strength, thus not only check premature ageing but delay the process of timely ageing.

**A) Sharir Vriddikar Bhavas – (Ch.Sh.6)**

- a. Kalayoga**—Youth is the proper time of full growth and one getting proper diet and nutrition in his youth ultimately leads to an excellent health and retard ageing.
- b. Swabhava Samsiddhi**—Natural progression of age with the passage of time i.e. from childhood to adulthood and then old age is a *Swabhavaja* or natural process which is genetically clocked.
- c. Ahara Shausthavam**—is the excellence of diet. It promotes health and immunity, thus delay the time of onset of old age. *Ahara Shausthavam* contributes in the proper growth and development of body as evident by following references –

आहारसम्भवं वस्तु।

(Ch.Su.28/45)

प्राणिनां पुनर्मूलमाहारो बलवर्णोजसांच।

(Su.Su.1/36)

Proper nutrition is the most important extrinsic factor affecting the growth. It continuously combats the effects of increased catabolism in the body due to various diseases and injuries and maintain homeostasis. Thus the diet should be adequate in calories, protein content, essential vitamins and minerals. So the total development of an individual and hence ageing process is dependent on the nutritive value of the food consumed.

- d. Avighata**—is the absence of all the causative factors (excessive physical, sexual and mental stress) which retard the growth of individuals.

**B) Balavriddkar Bhavas (Ch.Sh.6/13)**

The following factors are responsible for increased *Bala* of an individual. These factors are responsible for longevity, health and youthful old age. Absence or lack of these factors is responsible for weak constitution, easy susceptibility to diseases, and premature ageing (*Akalaja Jara*).

1. Birth in a place where strong people are born i.e. effect of the *Desha* (Environmental effect).

2. Birth at the time which is favorable and conducive in strength i.e. *Visarga Kala*.
3. Birth from parents who are strong in constitution i.e. *Genetic effects*.
4. Excellence of seed and soil i.e. healthy *beeja* and *Kshetra*, again genetic factors in sperm, ova and mother's womb.
5. Excellence of diet *Ahara Sampat*.
6. Suitability of diet *Satmya Sampat*.
7. Peace of mind, high psyche, mental stability *Satva Sampat*.
8. Physical exercise and cheerfulness- *Youvana*, *Karma* and *Samharsha*.

Thus the process of ageing depends upon the environmental and genetic factors, constitution, immunity, habits and diet of an individual and so decides the fate of progress of ageing (early or timely).

## ii. PSYCHOLOGICAL FACTORS

There are number of references given in our *Ayurvedic* texts which prove that psychic factors affect the entire physiology of body and mind and results in the early manifestation of signs and symptoms of premature ageing.

The aetiological factors of premature ageing related to disturbed mental health are fear (*bhaya*), excessive worries (*chinta*), anger (*krodha*), sorrow (*shoka*), greed (*lobha*), affection (*moha*), quarrelsome life (*kalahapriya bhraya*) & maladroitness (*kuputra*). (*Ch.Su.17/77*)

Concept of "*Prasannatmendriya manah*" is a major factor for good health. All the above psychological factors directly causes *mandagni* resulting in deterioration of *dhatu*s and hence provocation of ageing phenomenon.

## iii. ROLE OF TRIDOSHA IN AKALAJA JARA

The *tridosha* play a very important role in the maintenance of health and longevity.

During *Balyavastha*, *kapha* predominates in the body, during middle age, the *pitta* predominates and in old age *vata* predominates. *Kapha* is responsible for growth and development (even at cellular level), *Pitta* governs digestion and nutrition and hence is responsible for the vigour and vitality of youth. *Vata* which is closely related to *pranic* life energy governs all life function.

Unwholesome diet, improper life style and undue physical and mental stress creates an imbalance among these three *doshas* specially vitiation of *Vata dosha*.

Kapha and Pitta doshas gradually decreases and Vata increases spontaneously as the age advances. This *vata* according to its fundamental properties precipitates atrophy and involution i.e. *kshaya* and *shosha* of *dhatu*s which is responsible for manifestation of ageing. *(The Holistic Principle of Ayurvedic Medicine)*

#### iv. OJAKSHAYA – as cause of Akalaja Jara

The final essence obtained from all the seven *Dhatu*s i.e from *Rasa* to *Shukra* is called *Ojas* or *Bala* which imparts strength and innate immunity against diseases. Its maintenance plays a crucial role in old age related disease and longevity of life.

तदभावाच्च भीर्यन्ते भारीराणि भारीणि॥ (Su.Su.15/27)

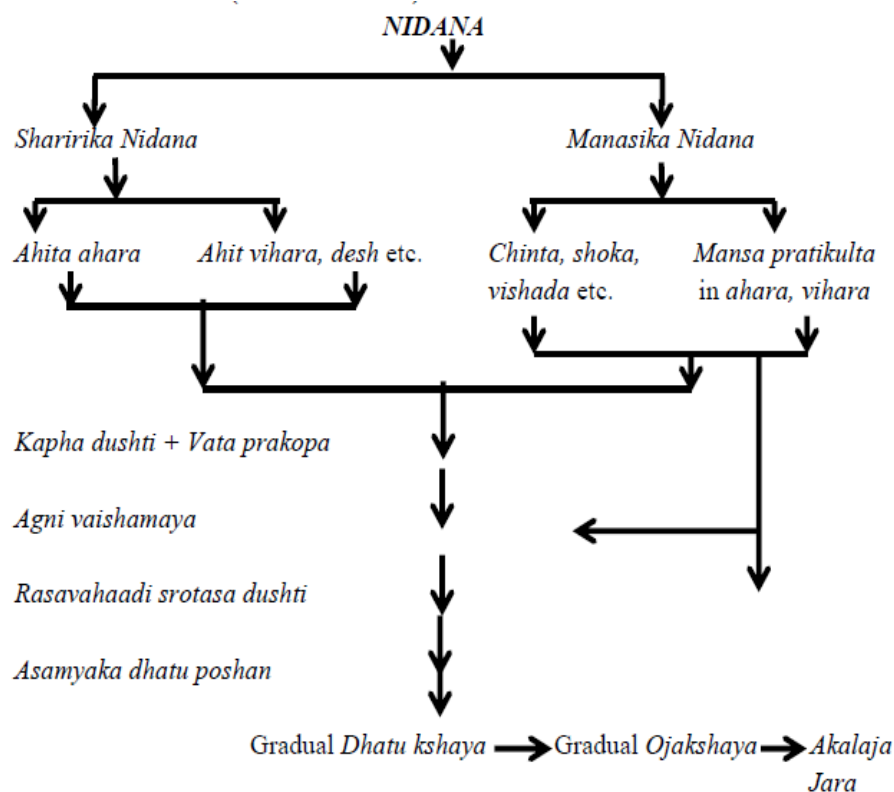
All the causative factors of *kshaya* cause depletion in the reserves of *Rasa Dhatu* which further impair the nourishment of successive *Dhatu*s. Thus, *Ojas* is affected resulting into early onset of ageing. Thus *Ojabala* plays an important role in the process of ageing.

**General causes of Akalaja jara mentioned in texts – related to improper diet and lifestyle including psychological causes are summarized below. (Ch.Chi. 1/2/3)**

Sr. No.	Causative factors		Charaka Samhita	Ashtang Samgraha
1	Gramya Ahara	Dietary causes	+	+
2	Amla Sevana		+	+
3	Lavana Sevana		+	+
4	Kshara sevana		+	+
5.	Sushka Shaaka & Mamsa Sevana		+	+
6.	Tila, Pala Sevana		+	+
7.	Pishtanna Bhojana		+	+
8.	Viruddha Anna		+	+
9.	Shooka, Shami Dhaanya		+	+
10.	Ruskha Anna		+	+
11.	Abhishyandi Bhojana		+	+
12.	Klinna, Guru Bhojana		+	+
13.	Puti, Paryushita Bhojana		+	+
14.	Vishamaashana		+	+
15.	Adhyashana		+	+
16.	Diwa swapana	Life style causes	+	+
17.	Nitya stree sevana		+	+
18.	Nitya Madhya Sevana		+	+
19.	Vishama Vyaayama		+	+
20.	Ati Vyaayama		+	+
21.	Sangshobhita Sharir		+	+
22.	Bhaya	Psychological causes	+	+
23.	Shoka		+	+

24.	<i>Krodha</i>		+	+
25.	<i>Lobha</i>		+	+
26.	<i>Moha</i>		+	+

## PATHOGENESIS (SAMPRAPATI) OF AKALAJA JARA



## II. CAUSES OF KALAJA JARA

- i. **KALA-** Kala Parinama is the most important factor responsible for ageing as mentioned in *Ch.Su.16/27*. It is also responsible for the diminution (*kshaya*) of *Dosha*, *Dhatu*, *Mala* *Vriddhavastha* and eventually *Mrityu*. (*Ch.Vi.8/122*, *Ch.Su.17/77*)

*Bala*, *Taruna*, *Youvana*, *Prodha*, *Vardhikya* are all sequential events of *kala*. (*Ch.V.8/122*)

Commenting on this, *Gangadhara* clearly depicted that sequence of events in ageing are time bound phenomenon i.e. as the time advances, puberty phase turns into adulthood and then old age which in turn ends in death of an individual.

यौवनान्ते काल परिणामेनान्ते जरा भवति ।

जरान्ते कालपरिणामेण मृत्यु भवति ।।

It is mentioned in both *Charaka* and *Sushruta Samhita* that the same foetus after the lapse of time becomes child, young and old. (*Ch.Sa.3/8*, *Su.Sh.3/32*)

Importance of *kala*( *time factor*) in the development of physical and sexual characteristics of an individual as he enters into adolescence from childhood has also been emphasized in *Sushruta Samhita*. (*Su.Su.14/18*)

So *kala* which cannot be stopped is an important factor in ageing process (here degenerative process). This is the reason that *kala* is mentioned ahead of *Swabhavasamsiddhi*, *Ahara shausthavam* & *Avighata* in *Sharira vriddikara Bhava*.

**ii. SWABHAVA VADA (Theory of Natural Phenomenon)**—Literally *Swabha* means the “inherent or innate property” or “by nature itself” or “natural constitution”. References in favour of *Swabhava Vada* as a factor responsible for ageing are quoted below-

- ❖ The birth of an individual occurs by itself. (*Ch.Su.11/6*)
- ❖ By nature itself, there will be development of embryo/foetus within the womb. (*Ch.Sh.4/27*)
- ❖ *Charaka* has counted “*Swabhava Sansiddhi*” in *Sharira Vriddhikara bhava*. (*Ch.Sh.6/12*)
- ❖ The body tissues are very minute and innumerable. Their union and disintegration are under the control of *Vayu* as well as *Swabhava*. (*Ch.Sh.7/17*)
- ❖ The growth and development of an individual from time of conception till the death is natural phenomenon. (*Su.Sh.3/36*)
- ❖ *Sushruta Samhita* has added *Jara* in *Swabhavika Vyadhi* i.e. it occurs by nature itself after certain period of time and cannot be stopped by any intervention. (*Su.Su.24/7*)

**iii. SWABHAVOPARAMA VADA (Theory of Natural destruction)**

प्रवृत्तिहेतुभविनां न निरोधेऽस्ति कारणम्।

केचितत्रापि मन्यन्ते हेतुं हेतोरवर्तनम्। (*Ch. Su. 16/28*)

There is a causative factor for formation of beings but no cause is found for their annihilation i.e. the destruction of any being is *swabhavika*. This theory can be applied from the *Madhyama Vaya* onwards when the catabolism speeds up in relation to anabolism leading to gradual *dhatu kshaya*. Here no cause can be ascertained for accelerated catabolism.

According to *Charaka Samhita*, the empirical soul accompanied with instruments of knowledge during conception are responsible for manifestation of life. On the other hand, the process of decay being quick in succession does not need any cause as such as it occurs by

itself. The reason is that process of destruction is too quick to allow any other causative factors to leave any impact there on. (*Chakrapani on Ca.Sh.1/58*).

On the basis of this theory, it may be deduced that there is cause for life but no cause of death can be certain or in other words, when the cause responsible for the life ceases to function, death ensues. Similarly, there is cause for growth and when it becomes ineffective or stops functioning, process of degeneration or ageing starts.

#### iv. SATI VIRODHAKA BHAVA

*Chakarapani* while commenting on *Ch.Su.1/45* stated that absence of an opposing factor leads to *Vridhi* of any substance. He explained that a wholesome diet should nourish the *dhatu*s of an old man as per *Samanya Siddhanta* and so the person should never become old and die. But this is not the case.

Even though a wholesome diet is consumed which replenish body tissues, an individual reaches a certain stage of life (old age) where the presence of factors called *Virodhaka Bhava* supersedes the effect of wholesome diet and thereby disrupts growth. This is nothing but inclination in catabolic activity with advancing age.

According to *Gangadhara*, if there are two antagonistic factor (anabolism and catabolism in this case), then one which is stronger overpowers the other and manifests its activities. Hence catabolic activities (*dhatu kshaya*) supervens after 6<sup>th</sup> decade of life and *Jara* which is a manifestation of *dhatu kshaya* occurs.

#### v. ROLE OF VAYU IN AGEING

*Vata* is the numerouno amongst the three *doshas* as it control the other two, *Pitta* and *Kapha*. It helps in the equilibrium of all the *Doshas*, *Dhatu*s and *Malas* and hence dominate the formation of total body structure and function.

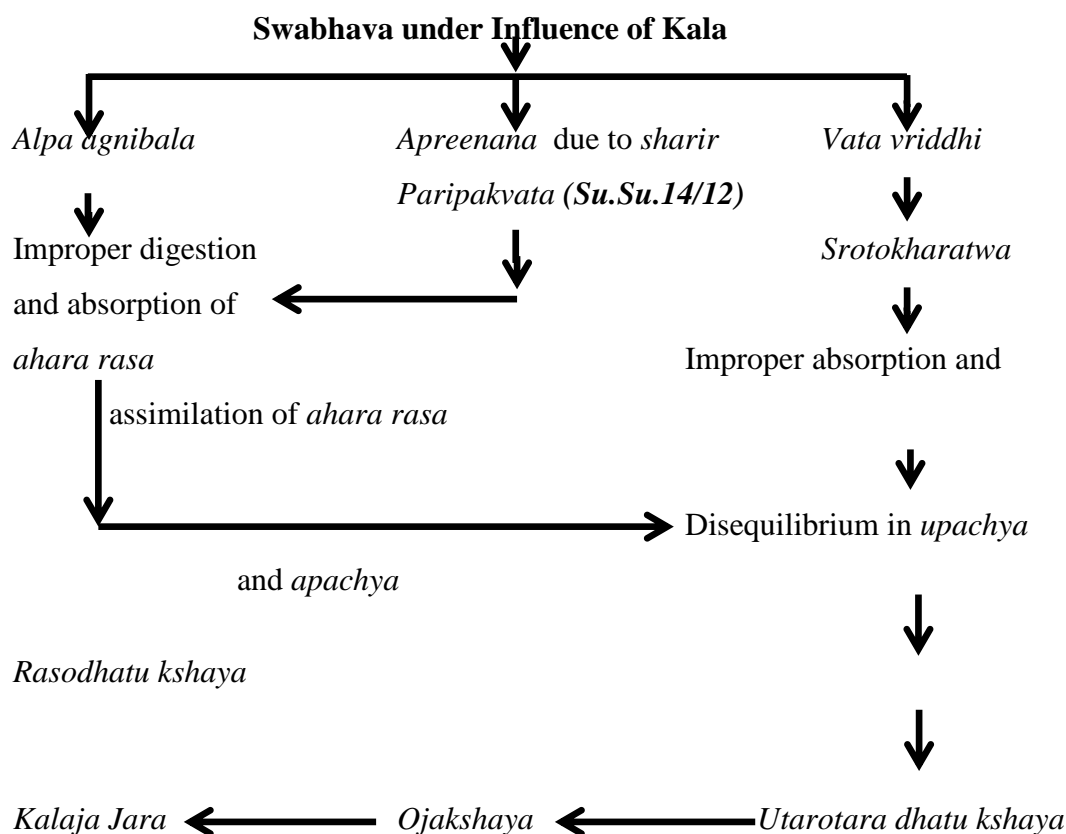
In *Vatakalakaliyadhyaya* of *Charaka Samhita* the normal and abnormal activities of *Vayu*, has been elaborated, some of which may be related to ageing process -

- ❖ सन्धानकर – Bringing together of body tissues.
- ❖ गर्भाकृतीनाम् – Moulds the shape of embryo
- ❖ स्थूलाणुस्रोतसां भेत्ता – Formation of both minute and gross body channels
- ❖ आयुषोऽनुवृत्तिप्रत्यय भूतो – Maintenance of total life span

❖ मृत्यु – Death of an individual

Moreover increase in *vata dosha* during old age causes *vishamagni* which results in improper synthesis of *rasa dhatus* and so impaired nourishment of successive *dhatus*. Thus *Ojas* is affected and senescence results.

### PATHOGENESIS (SAMPRAPTI) OF KALAJA JARA



### PROCESS OF AGEING

Ageing starts in different attributes at different period of time, thus the ancient classics give a detailed version on the physiological, psychological and biological aspects of ageing starting from childhood to puberty and senility. *Vagabhatta* observed initiation of decrement of certain particular faculties of the body as well as mind which was later followed in *Sharangadhara* and *Bhavprakasha*.



## Table showing

## Decade wise decline of various attributes

Loss of Attribute			
Decade	<i>Vaghbatta</i>	<i>Sharangadhara</i>	<i>Bhavaprakasha</i>
1 <sup>st</sup>	<i>Balyavastha</i> (childhood)	<i>Balyavastha</i>	<i>Balyavastha</i>
2 <sup>nd</sup>	<i>Vridddhi</i> (growth)	<i>Vridddhi</i>	<i>Vridddhi</i>
3 <sup>rd</sup>	<i>Prabha</i> (complexion)	<i>Chhavi</i>	<i>Chhavi</i>
4 <sup>th</sup>	<i>Medha</i> (intellect)	<i>Medha</i>	<i>Medha</i>
5 <sup>th</sup>	<i>Twaka</i> (skin)	<i>Twak</i>	<i>Twak</i>
6 <sup>th</sup>	<i>Shukra</i> (Reproductive capacity)	<i>Drishti</i>	<i>Drishti</i>
7 <sup>th</sup>	<i>Akshi</i> (vision)	<i>Shukra</i>	<i>Shukra</i>
8 <sup>th</sup>	<i>Shruti</i> (hearing)	<i>Vikrama</i> (vigor)	<i>Vikrama</i>
9 <sup>th</sup>	<i>Manas</i> (mind)	<i>Buddhi</i> (knowledge)	<i>Buddhi</i>
10 <sup>th</sup>	<i>Sarvendriya</i> (all sensory & motor organs)	<i>Karmendriya</i> (motor organs)	<i>Karmendriya</i>
11 <sup>th</sup>	-	<i>Chetas</i> (mind)	<i>Chetas</i>
12 <sup>th</sup>	-	<i>Jeevitum</i> (life)	<i>Jeevitum</i>

(A.S.Sh8/25; Sh.S.2/6/19; B.P.P.K.4/50)

From the above description it is clear that ageing does not occur simultaneously in all the tissues. Different body tissues are affected with ageing at different time period. Gradual declination of a particular faculty starts in each decade of life and by the end of decade, that particular faculty is lost.

## SAMPRAPTI SANGHATANA OF JARA

- ❖ *Hetu* - *Swabhava (kala)*
- ❖ *Doshas* - *Tridhoshas especially vata*
- ❖ *Dushyas* - *Sapta Dhatus especially Rasa*
- ❖ *Adhishthana* - *Sarva Shareera*
- ❖ *Srotas* - *Sarva Srotas*
- ❖ *Vyakti* - *Sarva Sharrera*
- ❖ *Sadhyasadyata* - *Yapya.*

## SIGNS AND SYMPTOMS OF JARA

Almost all *Ayurvedic* classics have mentioned signs and symptoms of *Jara awastha* which include anatomical, physiological and psychological manifestations.

S. No.	Symptom	Ch.S.	Su.S.	A.S.	A.H.	M.N.	Bhela
1.	<i>Dhatu kshaya</i>	+	+	+	+	-	+
2.	<i>Indriya bala kshaya</i>	+	+	+	+	-	+
3.	<i>Bala kshaya</i>	+	+	-	+	+	+
4.	<i>Veerya kshaya</i>	+	+	-	+	-	-
5.	<i>Utsaha kshaya</i>	-	+	-	+	-	-
6.	<i>Oja Hani</i>	-	-	-	+	+	-
7.	<i>Paurusha Hani</i>	+	-	-	-	-	-
8.	<i>Prakrama Hani</i>	+	-	-	-	+	-
9.	<i>Dharan shakti Hani</i>	+	-	-	-	+	-
10.	<i>Grahana shakti Hani</i>	+	-	-	-	+	-
11.	<i>Smaran shakti Hani</i>	+	-	-	-	+	-
12.	<i>Vachana shakti hani</i>	+	-	-	-	-	-
13.	<i>Vigyana shakti hani</i>	+	-	-	-	-	-
14.	<i>Vata vriddhi</i>	+	-	-	-	-	-
15.	<i>Vali</i>	-	+	+	+	-	-
16.	<i>Palitya</i>	-	+	+	+	-	-
17.	<i>Khalitya</i>	-	+	+	+	-	-
18.	<i>Alpa Retas</i>	+	-	-	-	-	-
19.	<i>Dhatu sada</i>	-	+	+	+	+	-
20.	<i>Kasa</i>	-	+	-	+	+	-
21.	<i>Swasa</i>	-	+	+	-	+	-
22.	<i>Vepathu</i>	-	-	+	-	+	-
23.	<i>Slatha Sara</i>			+			
24.	<i>Slatha Mamsa</i>			+			
25.	<i>Slatha sandhi</i>			+			
26.	<i>Slatha Asthi</i>			+			
27.	<i>Prabha Hani</i>			+			
28.	<i>Medha Hani</i>			+		+	
29.	<i>Twak Parushya</i>			+			
30.	<i>Dhatu Guna Bhransa</i>	+		+			+
31.	<i>Avnama</i>	-	-	+	-	-	-
32.	<i>Sleshma Singhanakodirna</i>		-		-	-	-
33.	<i>Dhairya Pranash</i>					+	
34.	<i>Chinta</i>					+	
35.	<i>Ghrinadhikya</i>					+	
36.	<i>Krodha Bahulya</i>					+	
37.	<i>Ativishmanti</i>					+	
38.	<i>Hastpada Kampa</i>					+	
39.	<i>Murdha Skhalana</i>					+	
40.	<i>Krishata</i>					+	

(C.Vi. 8/122, Su.Su. 35/36, A.S.Su. 8/24, A.H.Su.8/105, M.N.)

## MANAGEMENT OF JARA

Management of *Jara* includes programming of lifestyle in a such a way that *Akalaja Jara* can be avoided and *Kalaja Jara* can be delayed.

For this purpose, *Rasayana* drugs, *Ayurvediya Dinacharya*, *Ritucharya* and *Shodhana* therapy etc together show promising outcome.

### *Dinacharya and Ritucharya*

The entire regime of *Dinacharya* and *Ritucharya* is described in detail in *Ayurvedic* classics. These not only help in delaying the progress of ageing but also prevent the occurrence of diseases.

### *Shodhana Chikitsa*

It is unique manoeuvre of *Ayurveda*. When a person is not able to follow all his daily and seasonal regimen, *doshas* get accumulated in the body producing the disease and premature ageing. But if vitiated *doshas* are evacuated at proper time by *shodhana chikitsa*, equilibrium of *doshas* is achieved which nourishes the body very well, cure the diseases and reduces the ongoing ageing process.

### *Shaman Chikitsa*

It includes the use of *Rasayana* therapy which produce the best quality of *dhatu*s. *Rasayana*, here, signifies not only a single drug or medication, rather refers to a rejuvenative regime which includes drugs, dietetics, overall healthy life style and positive psychosocial conduct. In fact, *Rasayana* is the discipline of life which permits and improves patterns of tissue nourishment leading to a healthy growth.

### **Balancing Tridoshas in Body**

*Ayurveda* also links the phenomenon of ageing with doctrine of *Tridosha*. In principle, the childhood is embedded with *kapha* in body, adulthood with *pitta* and old age with *vata dosha*. *Vata dosha* by nature causes diminution of *dhatu*s producing senile changes. Thus the phenomenon of ageing can also be managed in tune with the *tridosha* theory with *yukti* of *Samanya* and *Vishesha* i.e. homology versus heterology besides specific rejuvenative *rasayana* measures.

**REFERENCES*****Ayurvedic Text***

- *Charak Chandrika* hindi commentary-Brahama Nanda Tripathi
- *Sushruta Samhita – Sushruta Samhita* by Ambika Datt Sashtri,
- *Ashtanga Hridaya*–With Sarvanga Sundari commentary Nirnaya Sagar press
- *Ashtang samgraha*- hindi commentary by Pakshadhara.

*Bhela Samhita* - Girijadaya Shukla, chowkambha Press, Varanasi.

- *Kashyapa Samhita*–Vidhyotini Hindi commentary–by Satyapal Chakrapani – Chakradatta with Bhavarth Sandipani Comm.
- *Madhava Nidana Uttarardha, Madhukosha* with Vidyotini, Hindi comm. by Sudarshna Shastri.
- *Sharngadhara*–Sarngadhara Gudhartha Dipika comm., edi. Parshuram Shastri, Varanasi.
- *Bhavaprakasha*–Chaukambha Sanskrit series Varanasi (Part 2).
- *Charaka Samhita-Ayurveda Dipika* commentary by Chakrapani, Chaukhambha Sanskrit Sansthan, 2001.

***Reference Books***

- *Ayurvediya Kriya Sharir* - Vaidya Ranajit Roy Desai.
- *Bhavaprakasha Nighantu* by Acharya Bhavamishra with Hindi commentary by K. Chuneekar.
- *Nighantu Adarsha (Uttarardha)*-Shri Bpa lal Gadbad lal Vaidya. Chaukhamba Orientalia, Vranasi; First edition.
- *Ayurvedic Pharmacology & Therapeutic Uses of Medicinal Plants (Dravyagun Vigyan)* by Vaidya V. M. Gogte Ed. Oct., 2000.
- *Indian Materia Medica*-K.M. Nadkarni. Popular Book Depot, Bombay
- *The Ayurvedic Pharmacopoea of India Part I Vol II*, first ed. 1999 published by Govt. of Health & Family Welfare, Deptt. of Indian System of Medicine & Homeopathy, New Delhi.
- *JRAS*, Oct-Dec. 2007; Xxviii(4), Geriatric Health Care Special Issue I published by CCRAS, New Delhi.
- *Manual on Geriatric Health Care Through Ayurveda* Ed. 2009 published by CCRAS, New Delhi.
- “The Legacy of Caraka”, Orient Longman by M.S. Valiathan.

- “Research Methodology for Ayurvedic Scholars - 2nd edition” by S.S. Babu, P. Jyothi, Chaukhambha, Orientalia, Edition 2004

### ***Modern Texts***

- Davidson's Principles and Practice of Medicine - Edited by Edwards C.R.W., Bouchier.
- Harrison's Principles of Internal Medicine, Vol. I and II; McGraw Hill Health Professions Division; 17th edition, 1998.

### ***Research Papers and Journals***

- Journal of Indian academy of geriatrics, 2006; 45.
- Indian Journal of Experimental Biology, March 1997; 35.
- Indian Journal of Experimental Biology, Jan. 1999; 37

### ***Dictionaries***

- Ayurveda Shabda Kosha-Venimadhav Joshi and N.H. Joshi, 1 and 2. Maharashtra Sahitya Samskriti Mandal, Mumbai, 1968.
- Oxford Advanced Learner's Dictionary of Current English-Cowie A.P.; Oxford University Press, New Delhi; 4th edi., 1991.
- Sabdakalpadruma - Raja Radha Kanta Deva. Chaukhamba Sanskrit Series
- “A Sanskrit-English Dictionary”, Bharatiya Granth Niketan, New Delhi By Monier-Williams Edition 2004.
- New Oxford American Dictionary”, Apple Inc., 2007.
- Encyclopaedia Britannica 2005, Deluxe edition.

### ***Web Sites***

- [www.geriatricindia.com](http://www.geriatricindia.com)
- [www.clinicaltrial.gov](http://www.clinicaltrial.gov)
- [www.antiaging.system.com](http://www.antiaging.system.com)
- [www.scholarsresearchlibrary.com](http://www.scholarsresearchlibrary.com)
- [www.pubmed.ncbi.com](http://www.pubmed.ncbi.com)