

Concept of Free-Radicals in Ayurveda

Ganga. R. Hadimani¹, Vineetha.V²

¹BAMS, MS(Ayu), PhD.

²BAMS, MD(Ayu), PGDYTSM

Abstract: *The phenomenon of growth, decline and death – ageing has been the source of considerable speculation. The universality of this phenomenon suggests that the reactions which cause it are basically the same in all the living beings. Knowledge of free radicals is there for western medical scholars since early 1900s. In this articles the unleashed connection between the theory of free radicals and the concept of ama explained in Ayurveda are demonstrated.*

Keywords: free radicals, *ama*, *agni*, *sadyovamana*, *leenatwa*, antioxidants

The knowledge of free radicals is there for western medical scholars since early 1900s. It is said that due to improper oxidation of food particles/body substances, there are emission of free radicals in to the body. These free radicals have high affinity to assail with other stable molecules so as to find an unpaired electron to get stabilized. So free radicals, by the continuous interactions with the molecules, either gets stabilised or destruct the other molecule. Here the former have a chance of 10% and the latter is at a chance of 90%. This is because, majority of the body tissues are staying stable in our body. This ultimately leads to the increased catabolism and then to ageing.

The concept of *ama* is a well established theorem of *Ayurveda* which is elaborately explained in the various texts of *Ayurveda*. The definition if *ama* given by *vagbhata* [1] clearly tells that *ama* is a product of improper oxidation. Here the term oxidation is denoted in *Ayurveda* by the term *paaka* and *paaka* is the function of *agni*. So *ama* is the improper product of *paaka* due to impaired *agni*. It is also said that *ama* acts like poison and it always tend to get mixed with other *dosha/dhatu/malas* hence named as *saamadosha/saamadhatu/saamamala* [2]. The *saamatva* in the body creates symptoms like fatigue, heaviness, lassitude etc [3]

For better understanding, the entire pathogenesis of *agnivaishamya/ama* can be classified under 2 phases. In the first phase, due to decreased digestive fire, the ingested food is not getting digested properly leading to the formation of improperly formed chyme, which stays back in stomach and works like poison, named as *amavisha* [4]. The *amavisha* is an emergency condition which seeks emergency elimination from the body with *sadyovamana* (emergency emesis) [5]. The word *sadyo* indicates emergency management. If it is not eliminated, it causes the diseases like *visoochika* and *alaska* in our body [6]. If *amavisha* becomes stagnant in *amashaya* for more time, it takes a different *gati/* action, like it mixes with other *dosha, dhatu* and *mala* by taking *tiryag gati*, which is the second phase of *ama* called *leena ama* [7]. This is the phase which can be exactly correlated to the excessive emission of free radicals to the body. It is told by great sages of *Ayurveda* that, if *ama* has attained the stages of *leenatva*, it is never advised to do any kind of eliminatory treatments like *vamana* etc and if done, it may lead to the destruction of the entire area where it is present [8]. There,

the ideal treatment modalities are *pachana, deepana*, and *rasayana chikitsa* (*pachana* does the digestion of undigested remnants of food, *deepana* enhances the digestive fire and *rasayana* does the antioxidant action.) [9].

The beauty of *Ayurveda* is that it emphasis on prevention of disease than cure [10]. Here also the free radical aggregations can be arrested/ avoided if the *ama* is treated in the 1st phase, so that all those diseases caused due to *amavisha* can be prevented. But by any kind of negligence, if it crosses the 1st phase, there are well effective treatments like application of antioxidants so that the entire process of excessive catabolism and thereby ageing can be arrested/ can be delayed, which are later found factual by the western scholars too. This may be the reason for the global acceptance of *Ayurveda* for anti-ageing therapies.

References

- [1] Vagbhata Ashtanga Hridaya Sutrasthana 13/25, 2003, Varanasi, Chowkhamba Krishnadas Academy, Reprint 2003, page no 216
- [2] Vagbhata Ashtanga Hridaya Sutrasthana 13/25, 2003, Varanasi, Chowkhamba Krishnadas Academy, Reprint 2003, page no 216
- [3] Vagbhata Ashtanga Hridaya Sutrasthana 13/25, 2003, Varanasi, Chowkhamba Krishnadas Academy, Reprint 2003, page no 216
- [4] Agnivesha Charaka Samhitha Vimanasthana 2/12, 2011, Varanasi, Chowkhamba Orientalia, Reprint 2011, page no 604
- [5] Agnivesha Charaka Samhitha Vimanasthana 2/13, 2011, Varanasi, Chowkhamba Orientalia, Reprint 2011, page no 605
- [6] Agnivesha Charaka Samhitha Vimanasthana 2/10, 2011, Varanasi, Chowkhamba Orientalia, Reprint 2011, page no 604
- [7] Vagbhata Ashtanga Hridaya Sutrasthana 13/25, 2003, Varanasi, Chowkhamba Krishnadas Academy, Reprint 2003, page no 461
- [8] Vagbhata Ashtanga Hridaya Sutrasthana 13/25, 2003, Varanasi, Chowkhamba Krishnadas Academy, Reprint 2003, page no 217
- [9] Vagbhata Ashtanga Hridaya Sutrasthana 13/25, 2003, Varanasi, Chowkhamba Krishnadas Academy, Reprint 2003, page no 217

- [10] Agnivesha Charaka Samhitha Sutrasthana 30/26, 2011,
Varanasi, Chowkhamba Orientalia, Reprint 2011, page
no 495

Author Profile



Ganga. R. Hadimani, Professor, Department of
Shalakya Tantra, J.S.Ayurveda Mahavidyalay,
Nadiad, Gujarat 387001



Vineetha.V., Assistant Professor, Department of
Ayurveda Samhitha & Siddhanta, J.S.Ayurveda
Mahavidyalay, Nadiad, Gujarat 387001