

TREATMENT OF ANAEMIA WITH SPECIAL REFERENCE TO IRON IN ANCIENT INDIAN MEDICINE AYURVEDA : A HISTORICAL PERSPECTIVE

K. SWAYAM PRAKASAM*

ABSTRACT

The two main texts of Ayurveda viz. Charaka Samhita and Sushruta Samhita, which were said to be written around 1500 B.C. mentioned the use of iron. Iron powder processed along with herbs like Amalaki (*Emblia officinalis*), a rich source of ascorbic acid, is indicated in Pandu (anaemia). Vagbhata, a 4th Cent. A.D. author of Ashtangahridaya considered iron as the best among drugs used for Pandu (anaemia). Use of iron in modern medicine for anaemia dates back to 18th and 19th centuries.

INTRODUCTION :

Human being is thriving to get relief from diseases since time immemorial. Human beings in ancient times were also troubled with many diseases with which we are suffering now-a-days. In those days also scientists struggled hard to find solutions for various medical problems with available facilities. By studying ancient medical literature, one can perceive the problems of ancient people and solutions adopted by those people. Ayurveda is one such ancient medical science, which is still in practice in India and which can give such information. Purpose of present

paper is to mention the description and treatment of anaemia mentioned in Ayurveda so as to study the ancient prescriptions for this disease with special reference to iron preparations.

Charaka Samhita and Suśruta Samhita are the two main depositories of Ayurveda. The former deals mainly with medicine and the latter with surgery. Ātreya and Dhanvantary are two main teachers of Ayurveda whose disciples wrote the texts of Ayurveda viz. Agniveśa Samhita and Suśruta Samhita (Samhita means collection). They are said to be lived as early as 1500 B.C. These two texts were thoroughly edited and systematized.

* Lecturer, S. V. Ayurvedic College, TIRUPATI - 517 501. A.P. (India)

Caraka edited Agniveśa Saṁhitā after whose name it became Caraka Saṁhitā. Suśruta Saṁhitā remained to be called with the same name. Exact date of Caraka is disputed. Historians put him between 600 B.C. to 100 A.D. (Ray 1965). Suśruta Saṁhitā is edited by Nāgārjuna and Candraṭa, who are said to be lived in third to fourth centuries A.D. (Ray et al 1980) and 10th century A.D. (Śarmā, 1975) respectively. Exact date of the oldest existing manuscripts of both these Saṁhitās are not known. Caraka Saṁhitā and Suśruta Saṁhitā described preventive and curative aspects of diseases. Etiological factors, prodromol symptoms, symptoms, prognosis and treatment of various diseases have been explained in both the texts. Anaemia is one among such diseases which needs special attention.

TREATMENT OF ANAEMIA IN CARAKA SAṂHITĀ :

General picture of anaemia mentioned in Caraka Saṁhitā is, deficiency of blood, fat, ojas, looseness of body parts and abnormality of complexion (Śarmā, 1983). Principles of treatment of anaemia explained in Caraka Saṁhitā are :

'The patient of anaemia after unction should be subjected to strong emesis and purgation. After evacuation he should be managed with wholesome diet

such as old rice, barley and wheat with soups of green gram, pigeon, pea and lentils or meat soup of wild animals and birds. Medicament should be administered to them according to doṣa and as specific to the disorder. (Śarmā, 1983, p. 276).

Various medicated ghees are prescribed for anaemia in Caraka Saṁhitā. Interesting thing is prescription of iron preparation for anaemia. One such prescription reads as follows (Śarmā, 1983, p. 279).

Powder of Trikaṭu (fruits of *Piper longum*, *Piper nigrum*, rhizome of *Zingiber officinale*), Triphalā (fruits of *Terminalia chebula*, *Terminalia belerica*, *Emblica officinalis*), Mustā, (*Cyperus rotundus*), Viḍaṅga (fruits of *Embelia ribes*), Citraka (root of *Plumbago zeylanica*) all in equal parts are mixed with nine parts of iron powder. This (Navāyasa) powder formulated by Kṛṣṇātreya is taken with honey and ghee, alleviates anaemia, heart disease, skin diseases, piles, and jaundice. Swarṇamākṣika (copper iron pyrite

processed) and Maṇḍūra are also indicated in anaemia. Maṇḍūra means iron pieces collected from places where iron is melted, and various instruments were prepared by blacksmith. These iron particles exposed to atmosphere more than 100 years

should be collected and used for therapeutic purposes. Iron becomes rusted and converted completely into iron oxide (Fe_2O_3) due to exposure to atmosphere for a long time, and this is purified and used in Ayurveda. Among other important herbal preparations, Dhātrī avaleha and Dhātryāriṣṭa, the two drugs mainly prepared out of fruit juice of Āmalakī (*Emblīca officinalis*) are indicated in anaemia.

The process in which iron is used for therapeutic purposes is mentioned in Caraka Saṁhitā elsewhere (Śamrā, 1983 p. 22).

The paper like pieces of sharp iron four fingers long and thin like sesamum seeds should be heated till they are red hot. Then they should be dipped in decoction of triphalā, cow urine, alkali prepared out of iṅgudī (*Balanites aegyptiaca* (Linn.) Delile) and Palāśa (*Butea manosperma* (Lam.) Kuntze), Lavaṅga (Salt). When they are transformed like collyrium they should be powdered finely. This powder mixed with honey and juice of āmalakī fruits (*Emblīca officinalis*) should be made into a linctus which should be kept in a ghee pitcher and stored for a year in granary of barley, stirring it from all sides every month. After the end of year it should be taken mixed with honey and ghee.

TREATMENT OF ANAEMIA IN SUŚRUTA SAṂHITĀ :

Principles of treatment of anaemia mentioned in Suśruta Saṁhitā (Śāstrī, 1974) are almost same as those of Caraka Saṁhitā. Suśruta mentioned fruit juice of āmalakī (*Emblīca officinalis*) and he mentioned iron powder along with Trikaṭu, Viḍaṅga powder and turmeric or Triphalā powder, Suśruta mentioned the use of Maṇḍūra.

Vāgbhaṭa, a 4th century A.D. author of Aṣṭāṅga Hṛdaya (Paradkar, 1982), credited iron as the best among drugs used for anaemia. In this way the important text of Ayurveda mentioned the use of iron in anaemia.

Later development in the use of iron is iron bhasma. Process of iron bhasma is fully established by 13th cent. A.D. which is compiled basing on earlier works. Chemically iron bhasma is Fe_2O_3 .

BRIEF HISTORY OF USE OF IRON IN MODERN MEDICINE :

In the sixteenth century A.D. the causative role of iron deficiency in the then prevalent green sickness or chlorosis of adolescent women began to be recognized. Sydenham is properly credited with identifying iron as a specific remedy to take the place of bleeding and purgings. In 1713,

Lemary and Geoffry provided more direct evidence that iron was present in blood (ash). In 1832, the French physician Pierre Blaud wrote that the malady chlorosis arises from a faulty formation of blood as a result of which the blood is an imperfect fluid or the colouring matter is so defective that is no longer suitable for stimulating the organism and maintaining the regular exercise of its functions. He reported a rapid cure of 30 patients given a mixture of equal parts of ferrous sulphate and potassium carbonate. The treatment of anaemia with iron followed the principles enunciated by Sydenham and Blaud. In twentieth century various aspects of iron metabolism were observed. (Basing on Goodman & Gillman, 1980).

DISCUSSION AND CONCLUSION :

More than 2000 years ago iron is indicated in anaemia in Ayurveda. Even in the absence of facilities also Ayurvedic Scientists established the clinical use of iron for anaemia. Constant observation of patients of various diseases might have led them to this finding. One such clue is, in the prodromal symptoms of haemorrhagic disorders, iron smell is mentioned. Probably this observation might have prompted the use of iron in anaemia. Role of stomach and liver in the production of blood is well established in *Suśruta Saṃhitā*

and *Aṣṭāṅga Hṛdaya* (Dwārakānāth, 1959), even though the presence of iron in blood is not mentioned in the books. Along with iron preparations, juice of *Āmalakī* or *Triphalā*, in which *Āmalakī* is present, is extensively indicated in anaemia. *Āmalakī* is rich source of ascorbic acid. Ascorbic acid is known to increase the absorption of iron. In this way *Āmalakī* facilitates absorption of iron whether dietary or supplementary. Pharmaceutically also *āmalakī* is an important drug.

In the preparation of iron *Āmalakī* juice or *Triphalā* is extensively mentioned. *Triphalā* facilitates conversion of iron into iron oxide. In this way by adding *Triphalā* during preparation and as an adjuvant with iron Ayurvedists achieved optimum use of iron particularly in anaemia. *Maṇḍūra*, the iron which is converted into iron oxide by constant exposure to atmosphere because of its presence in earth for years, is also indicated in anaemia. Turmeric is other important herb indicated in anaemia. This may work on liver and helps in anaemia. Role of liquorice (*Yaṣṭīmadhu*) needs further clarification.

In this way use of iron powder which is processed with *Triphalā*, a rich source of ascorbic acid, is well established in Ayurveda more than 2000 years ago.

REFERENCES

1. Dwarakanath, C. *Introduction to Kayachikitsa*, Bombay, popular Book Depot, 1959.
2. Gilman, A. G., Goodman, L. S. Gilman, A. (Ed.) *Goodman and Gilman's The Pharmacological basis of therapeutics*. New York, Macmillan publishing Co. Inc., 1980.
3. Kulkarni, A.D. (Hindi Trans.) *Sri Vaidyapathi Simhagupta Sunu Vagbhatacharya Virachitah "Rasaratna Samuchchayah."* New Delhi, Meharchand Lachmandas, 1982.
4. Paradkar, Harishastri (Ed.), *Ashtangahridaya (A Compendium of the Ayurvedic System) composed of Vagbhata with the commentaries Sarvangasundara of Arunadatta and Ayurvedarasayana of Hemadri*. Varanasi, Chowkhamba Sanskrit Series Office, 1982.
5. Ray, Priyaranjandas and Gupta Hirendranath. *Caraka Samhita: A Scientific Synopsis*, New Delhi. National Institute of Sciences of India, 1965.
6. Ray, P., Gupta, H., Roy, M. *Sushruta Samhita (A scientific synopsis)* New Delhi, Indian National Science Academy, 1980.
7. Sharma, P.V. *Ayurveda Ka Vaignanika itihasa*. Varanasi, Chaukhamba Orientalia, 1975.
8. Sharma, P.V. (Eng. Trans.) *Caraka Samhitā Agniveśa's treatise refined and annotated by Charaka and redacted by Drdhabala*. Varanasi, Chaukhambha Orientalia, 1983
9. Shastri, A. (Hindi Trans.) *Sushruta Samhita of Maharshi Sushruta*. Chaukhambha Sanskrit Sansthan, Varanasi, 1974.

शारीर भारतीय चिकित्सा पद्धति आयुर्वेद में पाण्डुरोग की चिकित्सा विशेषतः

लौह के संदर्भ में—एक ऐतिहासिक दृष्टिकोण

— के. रघु प्रकाश

लौह के प्रयोग का उल्लेख लगभग १५०० वर्ष ईसा पूर्व लिखित दो प्रमुख आयु-वेदीय ग्रन्थों—वरक संहिता तथा सश्वत संहिता में मिलता है। वनस्पतियों तथा आमलकी के छारा शक्ति लौह वर्ण का प्रयोग पाण्डुरोग में बताया गया है। चौथी सदी ईसा के अष्टाङ्गहृदय के कर्ता वाग्भट ने पाण्डुरोग में प्रयुक्त औषधियों में लौह को सर्वोत्तम माना है। पाण्डुरोग की चिकित्सा में लौह का प्रयोग पारंपारिक चिकित्सा पद्धति में १८ वीं तथा १९ वीं शताब्दियों से चला आ रहा है।