

Tāmra Dhātu

Metals and minerals are known to man since human civilization and became integral part of Āyurvedic therapeutics. Tāmra (copper) and its alloys (Pittala and Kānsya) are one among such metals. They are emphasized throughout classical literature for various therapeutic and non therapeutic purposes. A number of formulations are found in Bṛuhatrāyī in contexts like internal administration, external application, utilization in the preparation of instruments and other purposes.

Synonyms:

Caraka uses the term Arka in few places which clarifies by Cakrapāṇī as synonymous with Tāmra¹. Suṣṛūta uses the term Audumbara for Tāmra.

Tāmra (copper) is one such metals mentioned with wide range of therapeutics. Though wide therapeutic utility of Tāmra was increased with advent of Rasaśāstra, references pertaining to Tāmra can be traced back to ancient literature. Ample of Tāmra utilization references are found in Bṛuhatrāyī for internal administration, external applications, preparation of equipments and other purposes etc. Unfortunately, this information is scattered in the classics. Considering this, reference of Tāmra and its alloys available in Bṛuhatrāyī are compiled and grouped into categories with an intension to provide focus on therapeutic and non-therapeutic usage of them. The categories are as under.

✓ Utilization in therapeutics

- Internal administration
- External application

Utilization in the preparation of instruments/equipments.

Classification:

Caraka placed Tāmra under mineral group (Pārthīva) as one of six metals. In Suṣṛūta Saṃhitā, Tāmra is described in a group with other metals under the main heading as ‘Trapvādi Gaṇa’². Pharmacological properties and actions are clearly mentioned. Vāgbhata mentioned Tāmra as one of Lekhana Putapāka Dravya³. Aṣṭāṅga Hṛudaya include Kānsya under Tikta Skandha⁴.

Pharmacological action:

Suṣṛūta discussed pharmacological actions of Tāmra like astringent (Kaṣāya) and sweet taste (Madhura), cold in potency (ŚītaVīrya), scarificant (Lekhana) and laxative property (Sara)⁵. Kānsya is slightly bitter, scarificant, good for vision and mitigates Kapha and ⁶.

Tāmra in Suṣṛta Saṃhitā :

Trapvādī Gaṇa is specially attributed to cure number of conditions like Pipāsā (Thirst), Viṣa (Poison), Pāndu (Anemia) etc. Tāmra is mentioned to be one of the Lekhana Putapāka Dravya (drug used for scrapping)⁷. Seer emphasized anti diabetic activity of Tāmra in combination with other metals and decoction of Salasarādī Gaṇa⁸. Suṣṛūta used Tāmra in many forms like Anjana, Varti, Gutika and Rasakriyā to treat eye disorders⁹. If the base of Arbuda (tumor) is small, it can be kept encircled with Tāmra Pattī (thin sheet of copper)¹⁰. Wounds of Upadaṇṣa (gonorrhoea) are treated with sprinkling of Tāmra Curna along with other herbal powders¹¹. Different Śalākās (probes) for application of collyrium in different eye disorders were prepared from Tāmra¹². Vessels made of copper are advocated in different pharmaceutical procedures for preparation and storage of medicines¹³. He clearly said that water stored in vessels made up of copper, bronze, gold and precious stones should be used for drinking. It is said to be best in treating Paittika disorders. The references mentioned in Suṣṛūta Saṃhitā that hold Tāmra as one of active metallic constituent are listed at Table.

Table No 11: Therapeutic utilization of Tāmra in Suṣṛūta Saṃhitā

Sr.No	References	Formulation	Therapeutic uses
Utilization in therapeutics: internal administration			
1	Suṣṛūta Sūtra 38/62	Trapvādī Gaṇa	Pipāsā (Thirst), Viṣa (Poison), Pāndu (Anemia)
2	Suṣṛūta Cikītsā 12/10	Salasarādī Avaleha	Mehahara (Anti diabetic) (Eye disorders)
Utilization in therapeutics: external administration			
6	Suṣṛūta Uttara 12/13	Vartyanjana	Collyrium for Akaṣī Roga (Eye disorders)
7	Suṣṛūta Uttara 12/29	Anjana Yoga	Śukravaivarnya (discoloration)
8	Suṣṛūta Uttara 12/41	Rasakriyā	Collyrium for Akaṣī Roga (Eye disorders)

			disorders)
9	Suṣṛūta Uttara 12/46	Anjana Yoga	Puyāālasa (acute dacryocystitis)
10	Suṣṛūta Uttara 12/50	Pratyanjana	Praklinnavartma (conjunctivitis)
11	Suṣṛūta Uttara 15/26	Curnanajana	Arma (Pterygium), Sirajaala (haemangioma)
12	Suṣṛūta Uttara 18/24	Lekhana Putapāka Dravya	Lekhana Putapāka (scraping)
13	Suṣṛūta Uttara 18/85	Curnanajana	Anjana (Collyrium) for eyes in healthy person
14	Suṣṛūta Uttara 18/101	Gutikānjana	Kandu (itching), Shuklarma (pinguecula), Timira (blurred vision)
15	Suṣṛūta Uttara 19/15	Gutikānjana	Kukunaka (ophthalmia neonatorum)
Utilization in therapeutics: equipment/instruments			
16	Suṣṛūta Sūtra 45/13	Tāmra Pātra	Copper container
17	Suṣṛūta Sūtra 46/451	Tāmra Pātra	Copper container
18	Suṣṛūta Cikītsā 9/23	Tāmra Deep	Copper lamp
19	Suṣṛūta Cikītsā 29/13	Tāmra Pātra	Copper container
20	Suṣṛūta Cikītsā 35/11	Basti Netra	Nozzle of enema pot
21	Suṣṛūta Cikītsā40/25	Tāmra Pātra	Copper container
22	Suṣṛūta Uttara 12/40	Tāmra Pātra	Copper container
23	Suṣṛūta Uttara 12/49	Tāmra Kapala	Piece of copper
24	Suṣṛūta Uttara 12/53	Tāmra Ghata	Copper container
25	Suṣṛūta Uttara 17/85	Tāmra Śalākā	Copper probe
26	Suṣṛūta Uttara 17/97	Tāmra Pātra	Copper container
27	Suṣṛūta Uttara 18/61	Tāmra Pātra	Copper container
28	Suṣṛūta Uttara 18/63	Audumbari Śalākā	Copper probe
29	Suṣṛūta Uttara 18/104	Tāmra Pātra	Copper container
30	Suṣṛūta Uttara 42/105	Tāmra Pātra	Copper container
31	Suṣṛūta Sūtra 26/20	Tāmra Śalya	Copper instrument

Modern Science:

Modern science also proves antimicrobial¹⁴ and fungicidal¹⁵ activity of copper and its alloys surfaces. They also conclude that copper has potential application as an inhibitory agent in the various stages of the food processing operations. This may be the reason for seers advocating use of vessels and containers made of these metals in preparation and storage of medicines. It makes clear that such metals has special role in different clinical conditions. They have made their unique place in Āyurvedic pharmacopoeia and became integral part of Āyurvedic therapeutics.

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