

# Exploring the Utilization Patterns of Amra (Mangifera Indica Linn.) in Ayurvedic Formulations through Review of Ayurvedic Literature

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## Abstract

*Amra* (*Mangifera indica* Linn.), a member of the family *Anacardiaceae*, is recognized as a potent medicinal plant with extensive therapeutic applications across various ailments. It has use in the treatment of *Chhardi*, *Atisara*, *Karna Roga*, *Grahani*, *Raktapitta*, *Raktatisara*, *Javaratisara*, *Mukharoga* and other diseases by using the different dosage forms of *Amra* like *Svarasa*, *Kvatha*, *Churna*, *Taila*, *Ghrita*, *Avaleha*, *Lepa*, and many more. The present review aimed to gather all the information apropos the used pattern of *Amra* containing formulations from 11 classical texts of the Ayurved compendium. This screening revealed that, *Amra* is used in the form of *Kvatha*, *Churna* and *Taila* in maximum formulations out of 217 formulations. Hence, this review gives a new vision to the researchers for understanding the possible modification in drug development of *Amra*.

**Keywords:** *Amra*, *Mangifera indica* Linn., Ayurvedic literature, Formulations.

## Introduction

*Amra* (*Mangifera indica* Linn.), belonging to the *Anacardiaceae* family, is a delicious tropical fruit that is grown worldwide. The tree grows best in well-drained sandy loam; it does not grow well in heavy wet soils.[1] It is used as a *Chhardinigrahaniya* (Antiemetic), *Mutrasamgrahaniya* (Antidiuretic), *Purishasamgrahaniya* (Antidiarrheal) and in the treatment of *Chhardi* (Emesis), *Atisara* (Diarrhoea), *Karna Roga* (Disease of ear), *Grahani* (Malabsorption syndrome), *Raktapitta* (Bleeding disorder), *Raktatisara*, *Javaratisara*, *Mukharoga* (Disease of mouth).[2] In Ayurved compendium, different parts of *Amra* such as *Patra* (Leave), *Pallava* (Tender Leave), *Asthi* (Seed kernel), *Mula* (Root), *Twak* (Bark), *Pushpa* (Flower), *Majja* (Pulp), *Beeja* (Seed), *Phala* (Fruit), *Prarooha* (Sprout) and *Sara* (Hard wood) are utilized in preparing the various formulations such as *Svarasa* (Juice), *Kvatha* (Decoction), *Churna* (Powder), *Ghrita* (Medicated Ghee), *Taila* (Medicated oil), *Avaleha* (Confections), *Lepa* and many more.

Ayurvedic medicines are designed for both internal and external applications. The various dosage forms can be administered through different modes of administration such as *Abhyanga* (Massage), *Lepana* (Ointment), *Anjana* (Collyrium), *Gandusha* (Mouthwash), *Pichu* (Tampon), *Nasya* (Nasal drops) and *Varti* (suppository) which are considered under external applications. For internal and sometimes external use, Ayurvedic medicines are available in forms such as *Vati* (Tablet), *Khanda*, *Ghrita* (Medicated ghee), *Taila* (Medicated oil), *Churna* (Powder), *Avaleha* (Confection), *Yavagu*, *Yusha* (Soup) and *Kvatha* (Decoction) that are considered under internal and external administration.

According to a study, leaves of the plant contain Essential oil, Humulene, Elemene, Ocimene, Linalool, Nerol. Flowers contain Gallic acid, Ethyl gallate, Methyl gallate, n-octyl gallate, 4-phenyl gallate, Dihydrogallic acid.[3] Bark contain Protocatechic acid, Catechin, Mangiferin, Alanine, Glycine, Kinic acid, Shikimic acid, Manghophanol, Mangoleanone, Friedelin, Mangsterol, Manglupenone, Mangocoumarin.[4] Fruit pulp contain Vitamin A, Vitamin C, Carotene, Xanthophylls. Root contain Chromones, 3-hydroxy-2-chromone, 3-methoxy-2-chromone.[5]

The plant has various pharmacological activities. Almost all the parts of the mango have polyphenols, which are well known antioxidants.[6] Polyphenols has anti-inflammatory effects via inhibition of nuclear factor kappa-B.[7] Stem bark aqueous extract has analgesic activity.[8] The extract of roots, leaves, bark, fruit peel and kernel have antibacterial properties.[9] Leaves has antifungal activity.[10] Root has anthelmintic activity.[11] The extract of leaves has Anti-hyperlipidemic activity.[12] Fruit peel, flesh, seed kernel, leaves and bark have antidiabetic activity.[13] The extract of leaves has antiulcer activity.[14] The extract of seed and kernel has anti-diarrheal activity.[15] Factors responsible for making any formulations such as the part of the plant to be used that contains active principles and the process required to extract its active principles plays a major role. By keeping these facts in mind, the present review is aimed to screen the used pattern of *Amra* containing formulations from Ayurved compendium.

## Materials and Methods

References regarding *Amra* containing formulations are screened from 11 classical texts (Table No.1) and the information available on electronic media including google scholar, Pub Med, Ayush research portal and DHARA various research papers concerning the plant, *Amra* has been also screened.

**Table No. 1. List of classical texts mentioned *Amra* formulations with their abbreviations.**

| No. | Name of classical texts                                         | Abbreviations                |
|-----|-----------------------------------------------------------------|------------------------------|
| 1   | Charaka Samhita Sutrasthana/ Chikitsasthana/ Siddhisthana [16]  | Cha.Su./ Cha.Chi./ / Cha.Si. |
| 2   | Sushruta Samhita Chikitsasthana/ Kalpasthana/ Uttaratantra [17] | Su.Chi./ Su.Ka./ Su.Ut       |
| 3   | Ashtanga Samgrah Chikitsasthana/ Kalpasthana/ Uttaratantra [18] | A.S.Chi./ A.S.Ka./ A.S.Ut.   |
| 4   | Ashtanga Hridaya Uttarasthana[19]                               | A.H.Ut.                      |
| 5   | Chakradatta [20]                                                | C. D.                        |
| 6   | Gadanigraha [21]                                                | G. N.                        |
| 7   | Sharangdhara Samhita Madhyama Khanda/ Uttara Khanda [22]        | Sha.Ma.Kha/ Sha.Ut.Kha.      |
| 8   | Bhavaprakasha Samhita Madhyama Khanda [23]                      | B.P.Ma.Kha.                  |
| 9   | Yogaratanakara [24]                                             | Y. R.                        |
| 1   | Bhaishajya Ratnavali [25]                                       | B. R.                        |
| 1   | Arkaprakasha [26]                                               | A. Pr.                       |

## Observations and Results

### Characteristic and Synonyms

*Mangifera indica*, a beloved tropical fruit grown worldwide. It is a large green tree, valued mainly for its fruits, both in their unripe and ripe states. The tree grows in well-drained sandy loam but does not grow well in waterlogged soils [27]. *Amra* is regarded as king of fruits, liked by all. But if it is consumed more, it may cause indigestion.[28] It has *Madhura*, *Amla* and *Kashaya Rasa*, *Laghu*, *Ruksha Guna*, *Sheeta Virya* and *Katu Vipaka* [29]. It is known for its ability to pacify *Kaphapitta Dosha* and is indicated in various ailments such as *Chhardi*, *Atisara*, *Karna Roga*, *Grahani*, *Raktapitta*, *Raktatisara*, *Javaratisara*, *Mukharoga* and many more diseases.[30] During a review of Ayurvedic texts, it was found that *Amra* is initially referred to as '*Amra*' in the categories of '*Hridya Gana*',[31] '*Chhardinigravana Gana*'[32], '*Purishasamgrahaniya Gana*'[33] and '*Mutrasamgrahaniya gana*'[34] within the Charaka Samhita. After that different ayurvedic texts have used synonyms such as *Choota*, *Rasal*, *Sahakara*, *Atisaurabha*, *Kamanga*, *Madhudoota*, *Makanda*, *Pikavallabha* for it.[35] The classification of *Amra* mentioned in various classical texts is stated in table no. 2

**Table No. 2 the classification of *Amra* mentioned in various Texts**

| Sr. no. | Name of Text           | Gana/Varga/Skandha                                                                                                                                                     | References                                                              |
|---------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| 1.      | Charaka Samhita        | <i>Hridya Gana</i><br><i>Chhardinigravana Gana</i><br><i>Purishasamgrahaniya Gana</i><br><i>Mutrasamgrahniya Gana</i><br><i>Amla Skandha</i><br><i>Kashaya Skandha</i> | Su.4/10<br>Su.4/28<br>Su.4/31<br>Su.4/33<br>Vi.8/140<br>Vi.8/144        |
| 2.      | Sushruta Samhita       | <i>Nyagrodhadi Gana</i><br><i>Kashaya Varga</i><br><i>Taila Varga</i><br><i>Phala Varga</i>                                                                            | Su.38/48<br>Su.42/23<br>Su.45/127<br>Su.45/139                          |
| 3.      | Ashtanga Hridaya       | <i>Nyagrodhadi Gana</i>                                                                                                                                                | Su.15/41-42                                                             |
| 4.      | Ashtanga Samgraha      | <i>Hridya Mahakashaya</i><br><i>Vaminigravana Gana</i><br><i>Vitgravana Gana</i><br><i>Mutrasamgrahaniya Gana</i><br><i>Nyagrodhadi Gana</i><br><i>Amla Skandha</i>    | Su.15/15<br>Su.15/28<br>Su.15/31<br>Su.15/33<br>Su.16/35-36<br>Su.18/21 |
| 5.      | Kaiyadeva Nighantu     | <i>Aushadhi Varga</i>                                                                                                                                                  | 1/334-338                                                               |
| 7.      | Dhanvantari Nighantu   | <i>Amradi Varga</i>                                                                                                                                                    | 5/1-5                                                                   |
| 10.     | Bhavaprakasha Nighantu | <i>Amradi Phala Varga</i>                                                                                                                                              | 7/18                                                                    |
| 11.     | Madanpala Nighantu     | <i>Phaladi Varga</i>                                                                                                                                                   | 6/6-10                                                                  |
| 12.     | Raja Nighantu          | <i>Amradi Varga</i>                                                                                                                                                    | 11/24-25                                                                |
| 13.     | Saraswati Nighantu     | <i>Mahavriksha Varga</i>                                                                                                                                               | 1/5                                                                     |
| 19.     | Sodhala Nighantu       | <i>Amradi Varga</i>                                                                                                                                                    | 5/562                                                                   |
| 20.     | Saushruta Nighantu     | <i>Nyagrodhadi Gana</i>                                                                                                                                                | 10/44                                                                   |

### Different formulations of *Amra*

After screening, total 217 formulations i.e., *Svarasa* (15), *Kalka* (3), *Kvatha* (44), *Phanta* (1), *Hima* (1), *Churna* (42), *Taila* (33), *Ghrta* (5), *Avaleha* (10), *Paka/Khanda* (3), *Vati/Gutika* (8), *Anjana* (4), *Lepa* (23), *Arka* (4), *Yavagu*, *Asava*, *Arishta*, *Siddha Jala* (2), *Gandusha*, *Yusha*, *Ayaskriti*, *Dhoopa*, *Uddhavartana*, *Putapaka*, *Raga*, *Shadava*, *Panaka*, *Pichu*, *Varti*, *Nasya*, *Pinda*, *Basti* (1) are identified.

### *Svarasa*

In *Svarasa* formulation, *Patra*, *Ashthi*, *Twak*, *Jata* and *Pallava* are used in different indications as tabulated in table no.3.

**Table No. 3 *Amra* used in *Svarasa* formulation**

| No. | Formulations                      | Part used            | Indication                                     | Reference                               |
|-----|-----------------------------------|----------------------|------------------------------------------------|-----------------------------------------|
| 1.  | <i>Amrakapitthadi Svarasa</i>     | -                    | <i>Karna Roga</i>                              | Su.Ut.21/47                             |
| 2.  | <i>Jambu-Amrapatradi Drava</i>    | <i>Patra</i>         | <i>Karnasrava</i>                              | C.D. 60/34                              |
| 3.  | <i>Jambvadi Svarasa</i>           | <i>Pallava</i>       | <i>Raktatisara</i>                             | G.N.1/2/105                             |
| 4.  | <i>Jambvadi Svarasa</i>           | <i>Pallava</i>       | <i>Raktatisara</i>                             | G.N.2/2/105                             |
| 5.  | <i>Karnapurana Yoga</i>           | -                    | <i>Karna Ruja</i>                              | G.N.3/1/26-27                           |
| 6.  | <i>Amrasthi Rasa</i>              | <i>Asthi</i>         | <i>Nasika Putirakta</i>                        | G.N.3/4/69                              |
| 7.  | <i>Amra Pallava Rasa</i>          | <i>Pallava</i>       | <i>Raktatisara</i>                             | Sha.Ma. Kha.1/11                        |
| 8.  | <i>Jambvadi Svarasa</i>           | <i>Pallava</i>       | <i>Raktatisara</i>                             | B.P.Ma. Kha.2/58                        |
| 9.  | <i>Amrasthi Rasa</i>              | <i>Asthi</i>         | <i>Nasika Raktasrava</i>                       | B.P.Ma. Kha.9/48                        |
| 10. | <i>Jambvyadi Svarasa</i>          | <i>Pallava</i>       | <i>Raktatisara</i>                             | Y.R. Atisara<br>Chikitsa/1, Pg. 264     |
| 11. | <i>Jambu Pallavadi Svarasa</i>    | <i>Pallava</i>       | <i>Chhardi, Jvara, Atisara, Murcha, Trisha</i> | Y.R. Atisara<br>Chikitsa/4-5, Pg. 269   |
| 12. | <i>Bijapuradi Yoga</i>            | <i>Pallava, Jata</i> | <i>Sarva Dosha Chhardi</i>                     | Y.R. Chhardi<br>Chikitsa/1, Pg. 454     |
| 13. | <i>Amratwak Rasayoga</i>          | <i>Twak</i>          | <i>Upadamsha</i>                               | Y.R. Upadamsha<br>Chikitsa/1-2, Pg. 203 |
| 14. | <i>Jambvamradipallava Svarasa</i> | <i>Pallava</i>       | <i>Raktatisara</i>                             | B.R. 7/85                               |
| 15. | <i>Jambvadi Svarasa</i>           | <i>Patra</i>         | <i>Srava</i>                                   | B.R. 62/38                              |

### *Kalka*

In *Kalka* formulation, *Pallava*, *Ashthi* and *Valkala* is used in different indications as tabulated in table no.4.

**Table No. 4 *Amra* used in *Kalka* formulation**

| No. | Formulations              | Part used      | Indication                       | Reference |
|-----|---------------------------|----------------|----------------------------------|-----------|
| 1.  | <i>Amra Kalka</i>         | <i>Pallava</i> | <i>Raktatisara</i>               | C.D. 2/68 |
| 2.  | <i>Priyangukadi Kalka</i> | <i>Asthi</i>   | <i>Chhardi, Trishna, Atisara</i> | C.D.67/36 |
| 3.  | <i>Petyadi Kalka</i>      | <i>Valkala</i> | <i>Chhardhyatisara</i>           | B.R.71/40 |

### *Kvatha*

In *Kvatha* formulations, various parts of *Amra* such as *Patra*, *Pallava*, *Twak* and *Ashthi* are utilized for

different therapeutic indications as tabulated in table no.5.

**Table No. 5 Amra used in Kvatha formulation**

| No. | Formulations                   | Part used      | Indication                                         | Reference                         |
|-----|--------------------------------|----------------|----------------------------------------------------|-----------------------------------|
| 1.  | <i>Nimbadi Kashaya</i>         | -              | <i>Pittaja Prameha</i>                             | Cha.Chi.6/31                      |
| 2.  | <i>Peya Aushadha Yoga</i>      | <i>Pallava</i> | <i>Pittaja Chhardi</i>                             | Cha.Chi.20/30                     |
| 3.  | <i>Kariradi Kvatha</i>         | -              | <i>Yonirava</i>                                    | Cha.Chi.30/82-83                  |
| 4.  | <i>Jambvadi Yoga</i>           | <i>Pallava</i> | <i>Upadamsha Vrana</i>                             | Su.Chi.19/42-44                   |
| 5.  | <i>Amra Kashaya</i>            | <i>Dala</i>    | <i>Kukunaka</i>                                    | Su.Ut.19/13                       |
| 6.  | <i>Amrasthi Kvatha</i>         | <i>Asthi</i>   | <i>Pakvatisara</i>                                 | Su.Ut.40/70-72                    |
| 7.  | <i>Jambvayadi Kashaya</i>      | -              | <i>Raktapitta</i>                                  | Su.Ut.45/24                       |
| 8.  | <i>Jambvayadi Yoga</i>         | -              | <i>Raktapitta</i>                                  | Su.Ut.45/38                       |
| 9.  | <i>Jambupallavadi Kashaya</i>  | <i>Pallava</i> | <i>Chhardi, Jvara, Atisara, Murchchha, Trishna</i> | A.S.Chi.8/8                       |
| 10. | <i>Amra Kvatha</i>             | <i>Praval</i>  | <i>Pothaki</i>                                     | A.S.Ut.12/8                       |
| 11. | <i>Jabvyadi Kvatha</i>         | -              | <i>Upadamsha</i>                                   | A.S.Ut.39/5                       |
| 12. | <i>Arkadi Kashaya</i>          | -              | <i>Yoni Srava</i>                                  | A.S.Ut.39/70                      |
| 13. | <i>Bilvamrasthi Kashaya</i>    | <i>Asthi</i>   | <i>Chhardhyatisara</i>                             | C.D.2/44                          |
| 14. | <i>Jambvyadhya Kvatha</i>      | <i>Pallava</i> | <i>Chhardi</i>                                     | C.D.15/20                         |
| 15. | <i>Amradi Kashaya</i>          | -              | <i>Trishna, Chhardi</i>                            | C.D.16/16                         |
| 16. | <i>Panchapallava Kashaya</i>   | <i>Pallava</i> | <i>Mukhapaka</i>                                   | C.D.59/32                         |
| 17. | <i>Bilvadi Kvatha</i>          | -              | <i>Chhardi, Atisara</i>                            | C.D.67/35                         |
| 18. | <i>Bilvadi Kvatha</i>          | <i>Asthi</i>   | <i>Chhardi, Atisara</i>                            | G.N.1/2/67                        |
| 19. | <i>Jambupallavadi Kashaya</i>  | <i>Pallava</i> | <i>Mukharoga, Arochaka</i>                         | G.N.1/13/17-19                    |
| 20. | <i>Amradi Kashaya</i>          | -              | <i>Trishna</i>                                     | G.N.1/15/22                       |
| 21. | <i>Panchapallava Kashaya</i>   | <i>Pallava</i> | <i>Mukhapaka</i>                                   | G.N.3/5/138                       |
| 22. | <i>Yavadi Kvatha</i>           | <i>Asthi</i>   | <i>Sarvatisara</i>                                 | Sha.Ma. Kha.2/74                  |
| 23. | <i>Nyagrodhadi Kvatha</i>      | -              | <i>Yonidoshahara, Daha, Meha, Visha</i>            | Sha.Ma. Kha.2/112-115             |
| 24. | <i>Jambvamrapallava Shrita</i> | <i>Pallava</i> | <i>Vami, Atisara, Trisha</i>                       | B.P.Ma. Kha.17/27                 |
| 25. | <i>Nimbadi Kvatha</i>          | -              | <i>Pittastra Upadamsha</i>                         | B.P.Ma. Kha.51/16                 |
| 26. | <i>Jambvadi Kvatha</i>         | <i>Patra</i>   | <i>Dukhavardhana</i>                               | B.P.Ma. Kha.64/54                 |
| 27. | <i>Panchapallava Kashaya</i>   | <i>Pallava</i> | <i>Mukhapaka</i>                                   | B.P.Ma. Kha.66/160                |
| 28. | <i>Samangadi Kashaya</i>       | <i>Asthi</i>   | <i>Shleshma-Pitta Atisara, Raktaja Atisara</i>     | Y.R.Atisara Chikitsa/1-2, Pg. 268 |
| 29. | <i>Bilvadi Niryuha</i>         | <i>Asthi</i>   | <i>Chhardi, Atisara</i>                            | Y.R.Atisara Chikitsa/1-2, Pg. 268 |
| 30. | <i>Jambu Pallavadi Kvatha</i>  | <i>Pallava</i> | <i>Chhardi, Jvara, Atisara, Murchcha, Trisha</i>   | Y.R.Atisara Chikitsa/4-5, Pg. 269 |
| 31. | <i>Amrasthyadi Niryuha</i>     | <i>Asthi</i>   | <i>Chhardi, Atisara</i>                            | Y.R.Chhardi Chikitsa/1, Pg. 453   |

|     |                                |                    |                                                    |                                    |
|-----|--------------------------------|--------------------|----------------------------------------------------|------------------------------------|
| 32. | <i>Jambupallavadi Yoga</i>     | <i>Pallava</i>     | <i>Chhardi, Atisara</i>                            | Y.R.Chhardi<br>Chikitsa/1, Pg. 453 |
| 33. | <i>Jambvamrapallavadi Yoga</i> | <i>Pallava</i>     | <i>Chhardi, Jvara, Atisara, Murchchha, Trishna</i> | Y.R.Chhardi<br>Chikitsa/1, Pg. 454 |
| 34. | <i>Panchapallava Kashaya</i>   | <i>Pallava</i>     | <i>Mukhapaka</i>                                   | Y.R.Mukharoga<br>Chikitsa/5, 307   |
| 35. | <i>Jambvamra Yoga</i>          | <i>Tarun Patra</i> | <i>Karna Srava</i>                                 | Y.R.Karnaroga<br>Chikitsa/3, 316   |
| 36. | <i>Amra-Jambu Kvatha</i>       | <i>Twaka</i>       | <i>Garbhini Grahani</i>                            | Y.R.Striroga<br>Chikitsa/8, 421    |
| 37. | <i>Samangadi Kvatha</i>        | <i>Asthi</i>       | <i>Shleshma-Pitta Atisara, Raktasrava</i>          | B.R.7/53-54                        |
| 38. | <i>Bilavmrasthi Kvatha</i>     | <i>Asthi</i>       | <i>Chhardi, Atisara</i>                            | B.R.7/111                          |
| 39. | <i>Jambvadi Kvatha</i>         | <i>Pallava</i>     | <i>Chhardi, Jvara, Atisara, Murchchha, Trishna</i> | B.R.7/114-115                      |
| 40. | <i>Jambupallavadi Kvatha</i>   | <i>Pallava</i>     | <i>Sarvatisara, Grahani</i>                        | B.R.7/24                           |
| 41. | <i>Amradi Kashaya</i>          | -                  | <i>Chhardi, Trishna</i>                            | B.R.20/10                          |
| 42. | <i>Amradi Kvatha</i>           | -                  | <i>Trishna</i>                                     | B.R.20/30                          |
| 43. | <i>Panchapallava Kashaya</i>   | <i>Pallava</i>     | <i>Mukhapaka</i>                                   | B.R.61/84                          |
| 44. | <i>Amra-Jambu Kvatha</i>       | <i>Twak</i>        | <i>Garbhini Grahani</i>                            | B.R.68/48                          |

### Phanta

*Amra Prarooha* as a one ingredient is found in *Amradi Phanta* and is utilized for treating conditions such as *Jvara, Pipasa, Chhardi, Atisara and Murchchha*. [36]

### Hima

Only one reference of *Amradi Hima* is found and it is used specifically in the treatment of *Raktapitta*. [37]

### Churna

In *Churna* formulation, *Asthi, Twak, Majja, Beeja, Phala* and *Pallava* are used in different indications as tabulated in table no.6.

**Table No. 6 Amra used in Churna formulation**

| No. | Formulations              | Part used    | Indication                                                                       | Reference          |
|-----|---------------------------|--------------|----------------------------------------------------------------------------------|--------------------|
| 1.  | <i>Jambubijadi Churna</i> | <i>Asthi</i> | <i>Atisara</i>                                                                   | Cha.Chi.8/127      |
| 2.  | <i>Vachadi Churna</i>     | <i>Asthi</i> | <i>Grahani</i>                                                                   | Cha.Chi.15/134-136 |
| 3.  | <i>Katphaladi Churna</i>  | <i>Asthi</i> | <i>Pittatisara</i>                                                               | Cha.Chi.19/54      |
| 4.  | <i>Pushyanuga Churna</i>  | <i>Asthi</i> | <i>Arsha, Atisara, Yonidosha, Rajadosha, Shweta, Neela, Pitta, Rakta, Shyava</i> | Cha.Chi.30/90-95   |
| 5.  | <i>Ekasara Yoga</i>       | -            | <i>Sarpa Visha</i>                                                               | Su.Ka.5/84-86      |
| 6.  | <i>Badaradi Churna</i>    | <i>Twak</i>  | <i>Atisara</i>                                                                   | Su.Ut.40/96        |
| 7.  | <i>Rodhradi Churna</i>    | <i>Twak</i>  | <i>Ashu Jaytiastra, Trisha, Daha, Tamaka</i>                                     | A.S.Chi.3/45-48    |
| 8.  | <i>Murvadi Churna</i>     | <i>Twak</i>  | <i>Stanyadoshahara</i>                                                           | A.S.Ut.2/30        |

|     |                                 |                |                                                                                                                   |                                     |
|-----|---------------------------------|----------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| 9.  | <i>Triphaladi Churna</i>        | <i>Valkala</i> | <i>Atimridu Mamsa Vrana</i>                                                                                       | A.S.Ut.30/50                        |
| 10. | <i>Pushyanuga Churna</i>        | <i>Asthi</i>   | <i>Arsha, Raktatisara, Bala Krimi, Yonidosha, Rajodosha, Shyava, Shweta, Aruna, Asita Srava</i>                   | A.S.Ut.39/61                        |
| 11. | <i>Kasisadi Churna</i>          | <i>Asthi</i>   | <i>Pichchhila Yoni</i>                                                                                            | A.S.Ut.39/74                        |
| 12. | <i>Pushyanuga Churna</i>        | <i>Asthi</i>   | <i>Raktarsha, Raktatisara, Krimi, Yonidosha, Rajodosha, Shyava, Shweta, Aruna, Asita</i>                          | A.H.Ut.34/45-49                     |
| 13. | <i>Kasisadi Churna</i>          | <i>Asthi</i>   | <i>Vaishadhyakaraka</i>                                                                                           | A.H.Ut.34/55                        |
| 14. | <i>Nyagrodhadi Churna</i>       | -              | <i>Prameha, Mutrakruchchha</i>                                                                                    | C.D.35/27-31                        |
| 15. | <i>Haritakyadi Angaraga</i>     | <i>Twak</i>    | <i>Angaraga</i>                                                                                                   | C.D.36/36                           |
| 16. | <i>Pushyanuga Churna</i>        | <i>Majja</i>   | <i>Arsha, Atisara, Raktatisara, Dantaroga, Balaroga, Yonidosha, Rajodosha, Pandura, Aruna, Shyava Varna Srava</i> | G.N.1/3/193-198                     |
| 17. | <i>Gangadhara Churna</i>        | <i>Beeja</i>   | <i>Kapha, Maruta-Pitta Sambhava Atisara</i>                                                                       | G.N.1/3/266-267                     |
| 18. | <i>Gangadhara Churna</i>        | <i>Phala</i>   | <i>Sarvatisara</i>                                                                                                | G.N.2/2/61                          |
| 19. | <i>Shallakitwachadi Yoga</i>    | <i>Twak</i>    | <i>Raktatisara</i>                                                                                                | G.N.2/2/78                          |
| 20. | <i>Jambvamrapallavadi Yoga</i>  | <i>Pallava</i> | <i>Chhardi</i>                                                                                                    | G.N.2/14/40                         |
| 21. | <i>Amra Churna</i>              | -              | <i>Pradara</i>                                                                                                    | G.N.6/1/56                          |
| 22. | <i>Amra Churna</i>              | -              | <i>Atisara</i>                                                                                                    | G.N.6/11/120                        |
| 23. | <i>Brihatagangadhara Churna</i> | <i>Beeja</i>   | <i>Sarvatisara, Grahani</i>                                                                                       | Sha.Ma. Kha.6/50-52                 |
| 24. | <i>Vridhagangadhara Churna</i>  | <i>Beeja</i>   | <i>Pravahika, Sarvatisara, Grahani</i>                                                                            | B.P.Ma. Kha.2/32-34                 |
| 25. | <i>Nyagrodhyadhya Churna</i>    | -              | <i>20 Prameha, Mutrakrichchha, Pidika</i>                                                                         | B.P.Ma. Kha.38/67-71                |
| 26. | <i>Sunthyadi Churna</i>         | -              | <i>Amatisara, Mandagni, Aruchi</i>                                                                                | Y.R.Atisara Chikitsa/23-24, Pg. 260 |
| 27. | <i>Lodhradi Churna</i>          | <i>Asthi</i>   | <i>Shula, Atisara</i>                                                                                             | Y.R.Atisara Chikitsa/36, Pg. 261    |
| 28. | <i>Jambu Pallavadi Churna</i>   | <i>Pallava</i> | <i>Chhardi, Jvara, Atisara, Murchcha, Trisha</i>                                                                  | Y.R. Atisara Chikitsa/4-5, Pg. 269  |
| 29. | <i>Vridhagangadhara Churna</i>  | <i>Asthi</i>   | <i>Sarva Atisara</i>                                                                                              | Y.R.Grahani Chikitsa/1, Pg. 287     |
| 30. | <i>Talisadhya Churna</i>        | <i>Asthi</i>   | <i>Grahani, Kshaya, Kasa, Shvasa, Aruchi, Pliha,</i>                                                              | Y.R.Grahani Chikitsa/1-3, Pg. 287   |

|     |                                 |              |                                                                                                                                                                                                                                                                                                  |                                       |
|-----|---------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
|     |                                 |              | <i>Hridaroga, Arsha, Atisara, Jvara, Sthaulya, Prameha, Apasmara, Pandu, Gulma, Jathara</i>                                                                                                                                                                                                      |                                       |
| 31. | <i>Chandanadi Churna</i>        | <i>Asthi</i> | <i>Raktapitta, Arsha, Visha, Mada, Murchchha, Trisha, Atisara, Chhardi, Rajograha</i>                                                                                                                                                                                                            | Y.R. Raktapitta Chikitsa/1-6, Pg. 357 |
| 32. | <i>Nyagrodhadi Churna</i>       | -            | <i>Mutra Vishudhyati</i>                                                                                                                                                                                                                                                                         | Y.R. Prameha Chikitsa/1-4, Pg. 86     |
| 33. | <i>Haritakyadi Angaraga</i>     | <i>Twak</i>  | <i>Angaraga</i>                                                                                                                                                                                                                                                                                  | Y.R. Medoroga Chikitsa/4, Pg. 99      |
| 34. | <i>Pushyanuga Churna</i>        | <i>Majja</i> | <i>Arsha, Atisara, Raktaprahavika, Krimi, Yoni Dosha, Rajo Dosha, Pitta, Neela, Aruna, Shweta Srava</i>                                                                                                                                                                                          | Y.R. Pradara Chikitsa/1-4, 399        |
| 35. | <i>Gairikadi Churna</i>         | <i>Asthi</i> | <i>Yonikanda</i>                                                                                                                                                                                                                                                                                 | Y.R. Yonivyapata Chikitsa/1, 412      |
| 36. | <i>Amrasthyadi Churna</i>       | <i>Asthi</i> | <i>Chhardi</i>                                                                                                                                                                                                                                                                                   | Y.R. Balaroga Chikitsa/2, 443         |
| 37. | <i>Shallakyadi Churna</i>       | <i>Twak</i>  | <i>Raktatisara</i>                                                                                                                                                                                                                                                                               | B.R. 7/82                             |
| 38. | <i>Swalpagangadhara Churna</i>  | <i>Beeja</i> | <i>Pravahika, Sarvatisara, Sarvashula, Samgrahani, Sutika Roga</i>                                                                                                                                                                                                                               | B.R. 8/43-45                          |
| 39. | <i>Gangadhara Churna</i>        | <i>Beeja</i> | <i>Atisara, Grahani</i>                                                                                                                                                                                                                                                                          | B.R. 8/56-58                          |
| 40. | <i>Brihatlavangadhya Churna</i> | -            | <i>Sarva Doshahara, Grahani, Vatika, Paitika, Shleshmiki, Sannipata Grahani, Pakwatisara, Apakwatisara, Nanavarna Atisara, Jvara, Arochaka, Mandagni, Kasa, Shvasa, Vami, Amalpitta, Hikka, Prameha, Hallimaka, Pandu, Pliha, Gulma, Udara, Anaha, Shotha, Peenasa, Amavata, Ajirna, Pradara</i> | B.R. 8/64-74                          |
| 41. | <i>Nyagrodhadi Churna</i>       | -            | <i>20 Prameha, Mutrakrichchha, Pidika</i>                                                                                                                                                                                                                                                        | B.R. 37/45-49                         |

|     |                          |              |                                                                              |              |
|-----|--------------------------|--------------|------------------------------------------------------------------------------|--------------|
| 42. | <i>Chandanadi Churna</i> | <i>Beeja</i> | <i>Puyameha, Raktameha, Lasikameha, Agnimandya, Trishna, Jvara, Arochaka</i> | B.R.91/17-20 |
|-----|--------------------------|--------------|------------------------------------------------------------------------------|--------------|

## Taila

In *Taila* formulation, *Ashthi*, *Patra*, *Sara*, *Pushpa*, *Twak*, *Beeja* and *Pallava* are used in different indications as tabulated in table no.7.

**Table No. 7 Amra used in Taila formulation**

| No. | Formulations                    | Part used      | Indication                                                              | Reference                      |
|-----|---------------------------------|----------------|-------------------------------------------------------------------------|--------------------------------|
| 1.  | <i>Mahanila Taila</i>           | <i>Asthi</i>   | <i>Pana, Nasya, Abhayanga in Siroroga</i>                               | Cha.Chi.26/268-275             |
| 2.  | <i>Dhatakyadi Taila</i>         | <i>Asthi</i>   | <i>Pichchila, Stravini, Vippluta, Upapluta</i>                          | Cha.Chi.30/78-81               |
| 3.  | <i>Kasisadi Taila</i>           | -              | <i>Arsha</i>                                                            | Su.Chi.6/12                    |
| 4.  | <i>Manjishthadi Taila</i>       | <i>Pallava</i> | <i>Utpata</i>                                                           | Su.Chi.25/16-17                |
| 5.  | <i>Sairaiyakadi Taila</i>       | <i>Pushpa</i>  | <i>Vali, Palita</i>                                                     | Su.Chi.25/32-37                |
| 6.  | <i>Shaivaladi Taila</i>         | -              | <i>Karna Srava</i>                                                      | Su.Ut.21/45                    |
| 7.  | <i>Tiladi Taila</i>             | <i>Pallava</i> | <i>Paripota</i>                                                         | A.S.Ut.22/45                   |
| 8.  | <i>Jambvyadi Taila</i>          | <i>Patra</i>   | <i>Dukhavardhana</i>                                                    | A.S.Ut.22/48                   |
| 9.  | <i>Mahaneela Taila</i>          | <i>Phala</i>   | <i>Palita</i>                                                           | A.S.Ut.28/53                   |
| 10. | <i>Dhatkyadi Taila</i>          | <i>Sara</i>    | <i>Shoona, Uttana, Stabdha, Pichchhila, Sravini, Vippluta, Upapluta</i> | A.S.Ut.39/69                   |
| 11. | <i>Jambvyadi Taila</i>          | <i>Pallava</i> | <i>Utpata</i>                                                           | A.H.Ut.18/43-44                |
| 12. | <i>Banadi Taila</i>             | -              | <i>Chala Danta</i>                                                      | A.H.Ut.22/88-89                |
| 13. | <i>Dhatkyadi Taila</i>          | <i>Asthi</i>   | <i>Yoniroga</i>                                                         | A.H.Ut.34/51-53                |
| 14. | <i>Mahasahachara Taila</i>      | -              | <i>Dwijanam Sthairya</i>                                                | C.D.59/41-42                   |
| 15. | <i>Neelasahacharadhya Taila</i> | -              | <i>Chala Danta</i>                                                      | G.N.3/2/239-240                |
| 16. | <i>Mahakashaya Taila</i>        | -              | <i>Chirakala Vrana</i>                                                  | G.N.3/2/368-371                |
| 17. | <i>Mahaneela Taila</i>          | <i>Asthi</i>   | <i>Palitadisu, Urdhva Jatru Roga</i>                                    | G.N.3/2/480-484                |
| 18. | <i>Varunadi Taila</i>           | <i>Pallava</i> | <i>Putikarna</i>                                                        | G.N.3/2/60-61                  |
| 19. | <i>Amradi Taila</i>             | <i>Praval</i>  | <i>Putikarna</i>                                                        | Sha.Ut. Kha.11/150             |
| 20. | <i>Bibhitakadi Taila</i>        | <i>Asthi</i>   | <i>Nadivrana</i>                                                        | B.P.Ma. Kha.49/24              |
| 21. | <i>Jambvadi Taila</i>           | <i>Patra</i>   | <i>Upadamsha</i>                                                        | B.P.Ma. Kha.51/43-46           |
| 22. | <i>Amradi Taila</i>             | <i>Pallava</i> | <i>Putikarna</i>                                                        | B.P.Ma. Kha.64/42              |
| 23. | <i>Sahacharadhya Taila</i>      | -              | <i>Sthairya Dwijanam</i>                                                | B.P.Ma. Kha.64/46-47           |
| 24. | <i>Jambvadhya Taila</i>         | <i>Praval</i>  | <i>Putikarna</i>                                                        | Y.R. Karnaroga Chikitsa/1, 316 |

|     |                            |                |                                                                                                                |                |
|-----|----------------------------|----------------|----------------------------------------------------------------------------------------------------------------|----------------|
| 25. | <i>Grahanimihira Taila</i> | <i>Valkala</i> | <i>Grahani, Jvara, Trishna, Shvasa, Kasa, Hikka, Vali, Palita, Sarvatisara, Sarva Samgrahani, Vami, Bhrama</i> | B.R.8/594-601  |
| 26. | <i>Dadimadhya Taila</i>    | <i>Twak</i>    | <i>Grahani, 20 Prameha, 6 Arsha</i>                                                                            | B.R.8/602-608  |
| 27. | <i>Hriberadi Taila</i>     | <i>Asthi</i>   | <i>Raktapitta, Kasa, Shvasa, Urahkshata</i>                                                                    | B.R.13/156-161 |
| 28. | <i>Mehmihira Taila</i>     | <i>Valkal</i>  | <i>Sarva Mutramaya, Hasta, Pada, Shira Daha, Daurbalya, Kshinedriya, Nashta Shukra</i>                         | B.R.37/223-227 |
| 29. | <i>Bhrigaraja Taila</i>    | -              | <i>Daruna, Kesha Ghana Sthirakara</i>                                                                          | B.R.60/129     |
| 30. | <i>Mahanila Taila</i>      | <i>Asthi</i>   | <i>Palita</i>                                                                                                  | B.R.60/147-154 |
| 31. | <i>Sahachara Taila</i>     | -              | <i>Sthairya Dwija</i>                                                                                          | B.R.61/134-135 |
| 32. | <i>Jatyadhya Taila</i>     | <i>Beeja</i>   | <i>Mukharoga, Bhagandara, Upadamsha, Dushtavrana</i>                                                           | B.R.61/147-150 |
| 33. | <i>Gandharaja Taila</i>    | -              | <i>Daruna Vataroga, Krishata, Agnimandya, Klibata, Shukrameha, Snayuroga</i>                                   | B.R.78/14-21   |

## Ghrita

In *Ghrita* formulation, *Mula*, *Twak* and *Pallava* are used in different indications as tabulated in table no.8.

**Table No. 8 Amra used in Ghrita formulation**

| No. | Formulations                     | Part used      | Indication                                | Reference                        |
|-----|----------------------------------|----------------|-------------------------------------------|----------------------------------|
| 1.  | <i>Atisaranashaka Ghrita</i>     | <i>Twak</i>    | <i>Sarva Atisara</i>                      | Cha.Si.8/36-37                   |
| 2.  | <i>Udumbarashalatyadi Ghrita</i> | <i>Twak</i>    | <i>Atisara</i>                            | A.S.Ka.63/48                     |
| 3.  | <i>Nyagrodhadigana Yoga</i>      | -              | <i>Shodhana, Ropana, Bhagandara</i>       | G.N.4/7/20                       |
| 4.  | <i>Punarnavadi Ghrita</i>        | <i>Mula</i>    | <i>Shotha, Gulma, Udara, Pliha, Arsha</i> | Y.R.Shotha Chikitsa/1-2, Pg. 132 |
| 5.  | <i>Panchapallavadi Ghrita</i>    | <i>Pallava</i> | <i>Yonigandha</i>                         | B.R.67/25                        |

## Pinda

*Amra Twak* as an ingredient is found in *Petipathadi Pinda*. It's used in *Chhardi* and *Atisara*. [38]

## Avaleha

In *Avaleha* formulations, *Pallava*, *Asthi*, *Majja*, *Beeja* and *Twak* is used as tabulated in table no.9.

Table No.9 *Amra* used in *Avaleha* formulations

| No. | Formulations                 | Part used      | Indication                                                                                                                                                                                     | Reference         |
|-----|------------------------------|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| 1.  | <i>Amra Leha</i>             | -              | <i>Brumhana</i>                                                                                                                                                                                | Cha.Su.27/282     |
| 2.  | <i>Shringatakadi Avaleha</i> | -              | <i>Prameha</i>                                                                                                                                                                                 | Su.Chi.11/10      |
| 3.  | <i>Amrasthyadi Leha</i>      | <i>Asthi</i>   | <i>Chhardi</i>                                                                                                                                                                                 | C.D.67/28         |
| 4.  | <i>Kutaja Avaleha</i>        | <i>Majja</i>   | <i>Grahani, Atisara, Pravahika</i>                                                                                                                                                             | G.N.2/5/233-241   |
| 5.  | <i>Ativisha Avaleha</i>      | <i>Beeja</i>   | <i>Atisara</i>                                                                                                                                                                                 | Sha.Ma. Kha.2/148 |
| 6.  | <i>Kutaja Avaleha</i>        | <i>Pallava</i> | <i>Sangrahani, Raktatisara, Pakwatisara, Apakwatisara, Shotha, Jvaratisara</i>                                                                                                                 | B.R.6/50-58       |
| 7.  | <i>Madhukadhya Avaleha</i>   | -              | <i>Nanavarna, Savedana, Pradara, Yonishula, Kushishula, Bastishula, Raktatisara, Raktarsha, Raktapitta, Mutraroga, Hasta-Padadi Daha, Murchchha, Daha, Moha, Vami, Bhrama, Bhaskara Timira</i> | B.R.66/35-41      |
| 8.  | <i>Amratakadi Leha</i>       | <i>Twak</i>    | <i>Atisara</i>                                                                                                                                                                                 | B.R.71/49         |
| 9.  | <i>Amrasthyadi Leha</i>      | <i>Asthi</i>   | <i>Chhardi</i>                                                                                                                                                                                 | B.R.71/67         |
| 10. | <i>Balakutaja Avaleha</i>    | <i>Asthi</i>   | <i>Amashula, Raktasrava</i>                                                                                                                                                                    | B.R.71/102-104    |

### **Paka/Khanda**

In *Paka/Khanda* formulations, is used in different indications as tabulated in table no.10.

Table No.10 *Amra* used in *Paka/Khanda* formulations

| No. | Formulations         | Part used | Indication                                                                                                                           | Reference                    |
|-----|----------------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| 1.  | <i>Amrapaka</i>      | -         | <i>Grahani, Kshaya, Shvasa, Aruchi, Amlapitta, MahaShvasa, Raktapitta, Pandu</i>                                                     | B.P.Ma. Kha.72/41-48         |
| 2.  | <i>Kesara Paka</i>   | -         | <i>Vata Roga, Vatarakta, Asthi Roga, Shiro Roga</i>                                                                                  | Y.R.Vajikarana Yoga/1-8, 484 |
| 3.  | <i>Khanda Amraka</i> | -         | <i>Kasa, Shvasa, Kshaya, Arsha, Ajirna, Amlapitta, Trishna, Chhardi, Murchchha, Ashtavidha Shula, Pandu, Prameha, Mutrakrichchha</i> | B.R.74/158-172               |

### **Vati/Gutika**

In *Vati/Gutika* formulations, *Twak*, *Asthi* and *Beeja* is used in different indications as tabulated in table

no.11.

**Table No.11 Amra used in Vati/Gutika formulations**

| No. | Formulations                | Part used    | Indication                                                                                  | Reference                         |
|-----|-----------------------------|--------------|---------------------------------------------------------------------------------------------|-----------------------------------|
| 1.  | <i>Phalatradyadi Gutika</i> | <i>Twak</i>  | <i>Kashtasadhya Kantha, Talu, Aushtha Roga, Rohini, Mukhashosha, Putimukha</i>              | A.H.Ut.22/81-83                   |
| 2.  | <i>Kalingadi Gutika</i>     | -            | <i>Jvaratisara</i>                                                                          | C.D.1/18-20                       |
| 3.  | <i>Katvangadhya Gutika</i>  | <i>Asthi</i> | <i>Kapha, Pitta, Vata Atisara, Sannipata Atisara</i>                                        | G.N.1/4/95-96                     |
| 4.  | <i>Vishvadi Vatika</i>      | <i>Asthi</i> | <i>Pakwa, Apakwa Atisara, Shula, Grahani</i>                                                | Y.R.Atisara Chikitsa/3-4, Pg. 262 |
| 5.  | <i>Kalingadi Gutika</i>     | -            | <i>Jvaratisara, Raktatisara</i>                                                             | B.R.6/41-43                       |
| 6.  | <i>Jatiphaladhya Vati</i>   | -            | <i>Amatisara, Pancha Kasa, Amlapitta, Pravridha Grahani, Ajirna, Koshtha Dushti, Shotha</i> | B.R.8/390-398                     |
| 7.  | <i>Sahakara Vati</i>        | -            | <i>Kantha, Aushtha, Jihwa, Danta, Talu Roga</i>                                             | B.R.61/109-114                    |
| 8.  | <i>Jatiphala Rasa</i>       | <i>Beeja</i> | <i>Amatisara, Rakta Grahani, Atisara, Grahani</i>                                           | B.R./151-156                      |

## Anjana

In *Anjana* formulations, *Pushpa* is used in different indications as tabulated in table no.12.

**Table No.12 Amra used in Anjana formulations**

| No. | Formulations                           | Part used     | Indication                         | Reference                     |
|-----|----------------------------------------|---------------|------------------------------------|-------------------------------|
| 1.  | <i>Kubjakadhya Anjana</i>              | -             | <i>Pittashlema Vidagdhadrishti</i> | Su.Ut.17/8-9                  |
| 2.  | <i>Divandhyaratryandhyahara Anjana</i> | <i>Pushpa</i> | <i>Divandhya, Ratryandhya</i>      | Su.Ut.17/10-11                |
| 3.  | <i>Amryadi Anjana</i>                  | -             | <i>Pilla</i>                       | A.S.Ut.20/32                  |
| 4.  | <i>Karpasadhya Anjana</i>              | -             | <i>Chakshu Srava</i>               | Y.R.Netraroga Chikitsa/3, 384 |

## Gandusha

*Amra Pallava* is found as a one ingredient in *Shamana Gandusha* formulation.[39]

## Lepa

In *Lepa* formulations, *Asthi, Twak, Pallava, Majja, Sara* and *Beeja*. is used in different indications as tabulated in table no.13.

**Table No.13 Amra used in Lepa formulations**

| No. | Formulations              | Part used    | Indication        | Reference      |
|-----|---------------------------|--------------|-------------------|----------------|
| 1.  | <i>Savarnikarana Yoga</i> | <i>Asthi</i> | <i>Varnakrita</i> | Chi.25/116-117 |

|     |                                     |                |                                               |                      |
|-----|-------------------------------------|----------------|-----------------------------------------------|----------------------|
| 2.  | <i>Tutthadi Lepa</i>                | <i>Asthi</i>   | <i>Akala Palita</i>                           | A.S.Ut.28/44         |
| 3.  | <i>Kaleyakadi Lepa</i>              | <i>Asthi</i>   | <i>Savarnikarana</i>                          | A.S.Ut.30/69         |
| 4.  | <i>Bibhitakadi Lepa</i>             | <i>Asthi</i>   | <i>Sarvagati Nihanti</i>                      | A.S.Ut.36/36         |
| 5.  | <i>Shelvadi Lepa</i>                | <i>Twak</i>    | <i>Rakta Luta Damsha</i>                      | A.S.Ut.45/20         |
| 6.  | <i>Kesaradi Lepa</i>                | -              | <i>Santanika Damsha</i>                       | A.S.Ut.45/22         |
| 7.  | <i>Kaliyakadi Lepa</i>              | <i>Asthi</i>   | <i>Savarnakara</i>                            | A.H.Ut.25/61         |
| 8.  | <i>Jambupallavadi Lepa</i>          | <i>Pallava</i> | <i>Savarnakara</i>                            | A.H.Ut.32/22         |
| 9.  | <i>Kaliyakadi Lepa</i>              | <i>Asthi</i>   | <i>Savarnakara</i>                            | C.D.44/99            |
| 10. | <i>Amramajja Lepa</i>               | <i>Majja</i>   | <i>Indralupta</i>                             | C.D.56/95            |
| 11. | <i>Amrasaradi Lepa</i>              | <i>Sara</i>    | <i>Balanam Mukhapaka</i>                      | C.D.67/48            |
| 12. | <i>Bhrigarajadi Lepa</i>            | <i>Asthi</i>   | <i>Palita</i>                                 | G.N.3/1/67           |
| 14. | <i>Lohadi Lepa</i>                  | <i>Beeja</i>   | <i>Palita</i>                                 | G.N.3/1/123          |
| 15. | <i>Kaliyakadi Lepa</i>              | <i>Asthi</i>   | <i>Savarnakarana</i>                          | G.N.4/3/79           |
| 16. | <i>Amrabeeja Churna<br/>Pralepa</i> | <i>Beeja</i>   | <i>Daruna</i>                                 | Sha.Ut. Kha.11/19    |
| 17. | <i>Haritakyadi Lepa</i>             | <i>Twak</i>    | <i>Angaraga</i>                               | B.P.Ma.<br>Kha.39/76 |
| 18. | <i>Amrabeeja Lepa</i>               | <i>Beeja</i>   | <i>Darunaka</i>                               | B.P.Ma.<br>Kha.61/17 |
| 19. | <i>Amravalkala Lepa</i>             | <i>Valkala</i> | <i>Ghoratisara</i>                            | B.R.7/118            |
| 20. | <i>Haritakyadi Pralepa</i>          | <i>Twak</i>    | <i>Angaraga</i>                               | B.R.39/15            |
| 21. | <i>Savarnakarana Yoga</i>           | <i>Asthi</i>   | <i>Vranagranthi, Granthi,<br/>Antahdagdha</i> | B.R.48/93-97         |
| 22. | <i>Dhatryadi Lepa</i>               | <i>Majja</i>   | <i>Sthira, Snigdha Keshata</i>                | B.R.60/70            |
| 23. | <i>Sinduradi Lepa</i>               | -              | <i>Kesha Ranjana</i>                          | B.R.60/75-77         |

## Arka

In *Arka* formulations, *Asthi*, *Beeja*, *Patra* is used in different indications as tabulated in table no.14.

**Table No.14 *Amra* used in *Arka* formulations**

| No. | Formulations                             | Part used    | Indication            | Reference |
|-----|------------------------------------------|--------------|-----------------------|-----------|
| 1.  | <i>Pakwatisarahara Arka</i>              | <i>Asthi</i> | <i>Pakwatisara</i>    | A.Pr.5/7  |
| 2.  | <i>Nasaraktasrava Nirodhaka<br/>Arka</i> | <i>Asthi</i> | <i>Nasaraktasrava</i> | A.Pr.5/34 |
| 3.  | <i>Darunakanashaka Arka</i>              | <i>Beeja</i> | <i>Darunaka</i>       | A.Pr.7/3  |
| 4.  | <i>Amra Arka</i>                         | <i>Patra</i> | <i>Putikarna</i>      | A.Pr.7/33 |

## Yavagu

In *Yavagu* formulations, *Asthi* and *Twak* is used in different indications as tabulated in table no.15.

**Table No.15 *Amra* used in *Yavagu* formulations**

| No. | Formulations           | Part used    | Indication        | Reference         |
|-----|------------------------|--------------|-------------------|-------------------|
| 1.  | <i>Samgrahi Yavagu</i> | <i>Asthi</i> | <i>Sangrahana</i> | Cha.Su.2/28       |
| 2.  | <i>Amradi Yavagu</i>   | <i>Twak</i>  | <i>Grahani</i>    | Sha.Ma. Kha.2/155 |

### Yusha

*Amra Twak* as a one ingredient is found in *Khada Yoga*. It's used in *Kaphaja Atisara*. [40]

### Asava

In *Asava* formulations, *Asthi* and *Twak* is used in different indications as tabulated in table no.16.

**Table No.16 *Amra* used in *Asava* formulations**

| No. | Formulations          | Part used    | Indication                                               | Reference      |
|-----|-----------------------|--------------|----------------------------------------------------------|----------------|
| 1.  | <i>Patrang Asava</i>  | <i>Asthi</i> | <i>Pradara, Jvara, Pandu, Shopha, Mandagni, Arochaka</i> | B.R.66/122-126 |
| 2.  | <i>Chandana Asava</i> | <i>Twak</i>  | <i>Shukrameha</i>                                        | B.R.88/35-39   |

### Arishta

In *Arka* formulations, *Asthi* is used in different indications as tabulated in table no.17.

**Table No.17 *Amra* used in *Arishta* formulations**

| No. | Formulations                 | Part used    | Indication                                                                      | Reference      |
|-----|------------------------------|--------------|---------------------------------------------------------------------------------|----------------|
| 1.  | <i>Shringatakadi Arishta</i> | -            | <i>Prameha</i>                                                                  | Cha.Chi.11/10  |
| 2.  | <i>Ashoka Arishta</i>        | <i>Asthi</i> | <i>Raktapradara, Jvara, Raktapitta, Arsha, Mandagni, Arochaka, Meha, Shotha</i> | B.R.66/114-118 |

### Ayaskriti

Only one reference of *Shringatakadi Ayaskriti* is found in *Prameha Chikitsa*. [41]

### Siddha Jala

In *Siddha Jala* formulations, *Pallava* is used in different indications as tabulated in table no.18.

**Table No.18 *Amra* used in *Siddha Jala* formulations**

| No. | Formulations                | Part used      | Indication                     | Reference    |
|-----|-----------------------------|----------------|--------------------------------|--------------|
| 1.  | <i>Vatadi Sheetala Toya</i> | -              | <i>Visha Vegajanya Trishna</i> | A.S.Ut.47/17 |
| 2.  | <i>Panchapallava Toya</i>   | <i>Pallava</i> | <i>Gandhakarma</i>             | B.R.26/301   |

### Dhoopa

*Amra Pallava* as a one ingredient is found in *Shirishadi Dhoopa*. It's used in *Sarvajvara, Grahapaha*. [42]

### Uddhavartana

*Amra Patra* as a one ingredient is found in *Bilvadi Yoga*. It's used in *Varagandhahetu*. [43] **Putapaka**

Only one reference of *Kutaja Putapaka* is found in *Atisara Chikitsa*. [44]

### Raga

Only one reference of *Amra Raga* is found in *Kaphaja Madatyaya Chikitsa*. [45]

### Shadava

*Amra Phala* as a one ingredient is found in *Amratakadi Shadava*. It's used in *Vatika Madatyaya*. [46]

### Panaka

*Amra Phala* as a one ingredient is found in *Amratakadi Panaka*. It's used in *Vatika Madatyaya*. [47]

### Pichu

*Amra Twak* as a one ingredient is found in *Snehapichu*. It's used in *Vipluta*. [48]

## Varti

*Amra Twak* as a one ingredient is found in *Palashadi Varti*. It's used in *Pichchilata*, *Pariklinata*, *Stambhana*. [49]

## Basti

*Amra Twak* as a one ingredient is found in *Trayamanadi Basti*. It's used in *Dahajvarahara*. [50]

## Nasya

*Amra Asthi* as a one ingredient is found in *Dadimapushpa Nasya*. It's used in *Nasa Raktasrava*. [51]

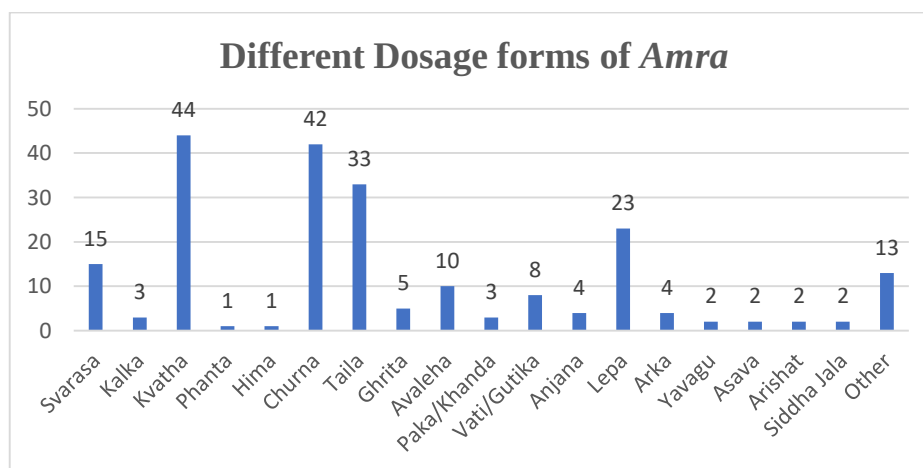
## Discussion

This review comprehensively screens the use of *Amra* employed as an ingredient in various formulations. A total of 217 formulations containing *Amra* have been identified and among them, 10 formulations are repeatedly mentioned by subsequent authors. Among these formulations 120 are for internal administration and 97 for external administration. In *Bhaishajya Ratnavali*, the maximum number of formulations (48) are mentioned in table no.19.

**Table No.19 Number of *Amra* formulations mentioned in various classical texts.**

| Sr. No.   | Name of classical texts     | Number of Formulations | Internal administration | External administration |
|-----------|-----------------------------|------------------------|-------------------------|-------------------------|
| 1.        | Charaka Samhita             | 21                     | 14                      | 7                       |
| 2.        | Sushruta Samhita            | 18                     | 8                       | 10                      |
| 3.        | Ashtanga Sangraha           | 22                     | 6                       | 16                      |
| 4.        | Ashtanga Hridaya            | 8                      | 2                       | 6                       |
| 5.        | Chakradatta                 | 15                     | 8                       | 7                       |
| 6.        | Gadanigraha                 | 26                     | 13                      | 13                      |
| 7.        | Sharangdhara Samhita        | 10                     | 3                       | 7                       |
| 8.        | Bhavaprakasha Samhita       | 16                     | 8                       | 8                       |
| 9.        | Yogaratanakara              | 29                     | 22                      | 7                       |
| <b>10</b> | <b>Bhaishajya Ratnavali</b> | <b>48</b>              | <b>20</b>               | <b>28</b>               |
| 11        | Arkaprakasha                | 4                      | 1                       | 3                       |

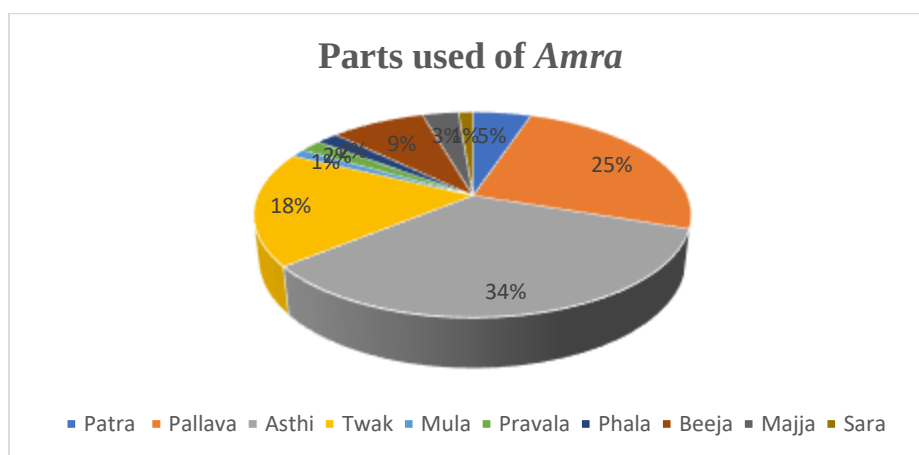
*Amra* used as an ingredient in different dosage forms are mentioned in graph 1.1.



**Graph 1.1 Different dosage forms of *Amra***

*Amra* is potential medicinal plant that has been used in traditional Ayurvedic medicine for the treatment of various ailments. In this review, different parts like *Patra*, *Pallava*, *Mula*, *Phala*, *Twak*, *Pravala*, *Asthi*, *Beeja*, *Majja* and *Sara* are used in various formulations. *Asthi* is commonly found in formulations used for *Atisara*, *Raktatisara*, *Raktapitta*, *Grahani*, *Chhardi* and *Raktapradara*. *Phala* is commonly found in formulations used for *Vatika Madatyaya*. *Pallava* is commonly found in formulations used for *Raktatisara*, *Chhardi* and *Trishna*. *Beeja* is commonly found in formulations used for *Atisara*, *Grahani*, *Darunaka* and *Palita*. *Twak* is commonly found in formulations used for *Atisara*, *Grahani* and *Prameha*. *Patra* is commonly found in formulations used for *Karnaroga*. *Majja* is commonly found in formulations used for *Rajodosh* and *Yonidosha*.

These different parts of *Amra* are utilized in various formulations. In which maximum formulations contain *Asthi* followed by *Pallava*, *Twak*, *Pravala*, *Mula*, *Phala*, *Beeja*, *Majja* and *Sara* are mentioned in graph 1.2



**Graph 1.2. Part used of *Amra* in different formulation.**

The plant has various pharmacological activities like, Antioxidants, Anti-inflammatory, Analgesic, Antibacterial, Antifungal, Anthelmintic, Anti-hyperlipidemic, Antidiabetic, Antiulcer and Anti-diarrheal are mentioned in table. Details of traditional uses of *Amra* and reported scientific studies validating the long run uses are presented in table no. 20

**Table no. 20 Traditional uses of *Amra* and their scientific validation.**

| Sr. No. | Activity reported   | Ayurveda Activity           |
|---------|---------------------|-----------------------------|
| 1.      | Antioxidants        | <i>Rasayana</i>             |
| 2.      | Anti-inflammatory   | <i>Sotha, Sopha</i>         |
| 3.      | Analgesic           | <i>Jvara</i>                |
| 4.      | Antibacterial       | <i>Putikarna, Yoniroga</i>  |
| 5.      | Antifungal          | <i>Darunaka</i>             |
| 6.      | Anthelmintic        | <i>Krimi</i>                |
| 7.      | Anti-hyperlipidemic | <i>Sthaulya,</i>            |
| 8.      | Antidiabetic        | <i>Prameha</i>              |
| 9.      | Antiulcer           | <i>Vrana, Mukhapaka</i>     |
| 10.     | Anti-diarrheal      | <i>Atisara, Raktatisara</i> |

## Conclusion

This comprehensive review of *Amra* containing formulations provides the details that the therapeutic usage of plant in the form of *Kvatha*, *Churna* and *Taila* which have been employed since ancient times. *Amra* finds a wide range of therapeutic importance in 217 formulations, including 120 for internal and 97 for external administration. In dosage forms *Kvatha* was found maximum 44 in number. *Amra* possesses 10 important pharmacological actions and indicated in various clinical conditions. The extensive utilization of *Amra* Ashthi and *Pallava* in pharmaceutical contexts suggests its potential as a source of phytoconstituents that contribute to its therapeutic efficacy. It is also needed to assess the suitable dosage forms for particular disease conditions through clinical trials.

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