

AYURVEDIC RASAKALPAS FOR MENTAL HEALTH: A REVIEW

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ABSTRACT

Background: The World Health Organization defines health as a state of complete physical, mental, and social well-being, not merely the absence of disease. While modern pharmacotherapies like SSRIs and TCAs manage mental health conditions, they often cause gastrointestinal issues, neurological side effects, and risks like Serotonin Syndrome, which can diminish overall quality of life. **Objective:** To review herbo-mineral formulations (*Rasakalpas*) from *Bharat Bhaishajya Ratnakar* and *Siddhayogsangraha* to evaluate their therapeutic role and safety profile in mental health management. This review synthesizes Ayurvedic approaches to mental health, highlighting both non-pharmacological (*Adravyabhut*) and pharmacological (*Dravyabhut*) strategies.

Methods: It examines *Dravyabhut* therapies, especially *churnas*, *vati*, *ghritas*, and *asava-arishtas*, specifically *Rasakalpas* containing *kajjali* (mercury-sulfur preparation) and *Dhatu-bhasmas* (processed metallic powders). Results: Ayurvedic formulations targeted for indications like *Medhya Rasayana* (cognitive enhancement), memory improvement (*Smruti*), psychosis (*Unmad*), and epilepsy (*Apasmar*) exhibit high efficacy. Due to their *Yogavahi* (catalytic/potentiating) and *Srotosukshmagami* (micro-channel penetrating) properties, *Rasakalpas* offer rapid absorption and swift target-site action. **Conclusion:** Ayurvedic *Rasakalpas* present a safe, holistic alternative or adjunct to conventional psychiatric medications. They effectively reduce anxiety, enhance cognitive function, promote emotional equilibrium, and improve sleep quality with minimal side effects. Further documentation of classic formulations from *Bharat Bhaishajya Ratnakar* and *Siddhayogsangraha* supports their integration into modern mental health care.

KEYWORDS: *Apasmar*, Mental health, *Medhya*, *Rasakalpa*, *Unmada*.

INTRODUCTION

Mental health is a critical aspect of overall well-being, influencing an individual's health as defined by WHO. Globally, mental disorders affect millions, with depression, anxiety, stress, maniac disorders, and some associated with neurological disorders. A mental disorder is defined by a clinically significant disturbance in an individual's cognition, emotional status, or behaviour.^[1] In 2021, nearly one in every seven people (one billion) around the world were affected by a mental disorder, with anxiety and depressive disorders being the most common.^[2] A study reveals that there are psychiatric disorders associated with Alzheimer's disease; thus there's a need to integrate treatment modalities along with treatment for AD. Even though there are advances in modern medicine, managing mental health remains a challenge with detrimental effects on the body, leading to increased interest in Ayurvedic medicines, which act on vitiated doshas and decrease symptoms of the disease. In Ayurveda, *Graha chikitsa* is mentioned as one of the branches in *Ashtangayurveda*. *Graha chikitsa* includes detailed knowledge on *nidana* and *chikitsa* for *grahadosha*, which can be correlated to psychosis. In Ayurvedic texts, mental disorders are explained based on vitiation of *trigunas* (*Raja*, *Tama*, *Satva*) and *tridoshas* (*vata*, *pitta*, *kapha*).^[3] In *Ashtang hriday* and *Charak samhita sutrasthana*, *Nanatmaj vyadhis* (diseases caused by *vata*) of *vata dosha* have been enlisted, which include *akshepak* (seizure), *apasmar*, *bhrama roga* (vertigo), and *atipralapa* (delirium), respectively. *Unmada* is a collective term including a variety of psychiatric conditions characterized by the derangement seen across eight psychopathological domains, i.e., *Mana* (mind), *Buddhi* (intellect), *Sangya dnyana* (sense), *Smriti*, *Bhakti*(desire), *Sheela*(temperament), *Cheshta* (motor activity), and *Achara*(conduct).^[4] Many clinical and preclinical studies show positive results with the use of *rasakalpas* and herbal medicines against psychiatric disorders. This review enlists the *rasakalpas* indicated in *unmada*, *apasmar*, *bhrama*, *medhya rasayana*, *smruti bhramsha* (memory loss). These *rasakalpas* contain *bhasmas* of *rasa-dravyas* like *dhatu*, *maharasa*, *uparasa*, *visha varga* (poisonous medicines) along with herbal ingredients which act on the brain, showing anxiolytic or antidepressant effects.

MATERIALS AND METHODS

Compilatory classical books like *Siddhayogasangraha*^[5] (19th century) and *Bharat Bhaishajya Ratnakar*^[6] (19th century), volumes 1-5 (BBR-1,2,3,4,5) have been studied under

Rasaprakarana. All *rasakalpas* containing *bhasmas* of *rasadravyas* are mainly or secondarily indicated in *unmada*, *apasmar*, and symptoms like *bhrama*, *smrutinasha*, *buddhi*, *mandabuddhitwa* (impairment of memory), and *medhya rasayana* are included in this study. Some formulations contain more than five *bhasmas* with other herbal ingredients. *Kalpas* containing only *rasadravyas* are mentioned in the table for the formulations, as the article focuses on the role of *rasabhasmas*. Most of the *rasakalpas* have *bhasmas*, eg. *Swarna* (gold), *roupya* (silver) *bhasmas*, *kupipakwa rasayana* (medicine prepared from a special device called *valukayantra*) eg. *rasasindur*, *makardhwaj* and some contain *dhatu churna* eg. *loha churna*. Some *kalpas* with the same name are repeated in the table but have different ingredients or method of preparation.

OBSERVATIONS

In this review, two compilatory classical texts are reviewed from which seventy *rasa* formulations are found. *Rasa* formulations which are primarily indicated in *apasmar* and *unmada* with their name, ingredients, and textual reference are mentioned in Table 1 from the above-mentioned texts. Table 2 contains formulations which are primarily indicated in *unmada* with the same, and Table 3 contains *kalpas* for *apasmar*. Table 4 is listed with *kalpas* indicated in psychiatric symptoms like *bhrama*, *smrutinasha*, *buddhi*, and are *medhya* in nature from the above texts. Some formulations have *mruganabhi* (deer musk) and *visha dravyas* like *vatsanabh*, *ahipheha*, *dhattur* and *halahal*, while others consist of *Sudha varga* (calcium-rich) *dravyas* like *mukta* (pearl), *shukti* (cowry), *shankha* (conch) and *praval* (coral) in *Bhasma* form.

Table 1: Rasakalpas indicated in both Unmada and Apasmar.

Sr. No	Rasakalpas	Rasadravya bhasmas	References
1	<i>Amvatavidhwansako rasa</i>	<i>Shuddha parad & gandhak, visha</i>	BBR-1
2	<i>Unmadbhanjani gutika</i>	<i>Shuddha manashila</i>	BBR-1
3	<i>Unmadagajkesari(1)</i>	<i>Shuddha parad & gandhak</i>	BBR-1
4	<i>Unmadagajkesari rasa(2)</i>	<i>Shuddha parad, gandhak & manashila, dhattur</i>	BBR-1
5	<i>Unmadbhanjanorasa</i>	<i>Bhasmas of vanga, roupya, abhrak, praval, loha</i>	BBR-1
6	<i>Chatusamamanduram</i>	<i>Mandur bhasma</i>	BBR-2
7	<i>Chintamanichaturmukha rasa(2)</i>	<i>Shuddha parad & gandhak, bhasmas of loha, abhrak, swarna</i>	BBR-2
8	<i>Trikatrayadyam loha</i>	<i>Bhasmas of mandur, kantalo</i>	BBR-2
9	<i>Trikatrayadyam loha</i>	<i>Loha bhasma</i>	BBR-2
10	<i>Prachandabhairavo rasa</i>	<i>Shuddha parad, gandhak & hingul, Bhasmas of kasis, hingul</i>	BBR-3

11	Devbhuti rasa	Tamra bhasma	BBR-4
12	Mahodayapratyayasaar rasa	Shuddha parad, hingul & gandhak, rasasindur, bhasmas of abhrak, tamra, loha, hingul, swarnamakshik	BBR-4
13	Mrutprandayi rasa	Shuddha parad, gandhak, tankan, vatsanabh	BBR-4
14	Yogendra rasa	Rasasindur, bhasmas of swarna, kanta, loha, abhrak, mukta, vanga	BBR-4
15	Laghu vatavidhwans rasa (3)	Shuddha parad & gandhak, vatsanabh	BBR-4
16	Shivagutika	Shuddha shilajatu	BBR-5
17	Saptvinshatiko guggul	Swarnamakshik bhasma	BBR-5
18	Sarpagandhachurna yoga	Rasasindur	Siddhayogasangraha
19	Swayanbhu guggul	Shuddha shilajatu, swarnamakshik, loha bhasma	BBR-5

Note. BBR: Bharat Bhaishajya Ratnakar (Volumes 1–5).

Table 2: Rasakalpas indicated in Unmada.

Sr. No	Rasakalpas	Rasadravya bhasmas	References
1	Unmadagajankush rasa	Shuddha parad, gandhak, abhrak bhasma, vish, dhattur	BBR-1
2	Unmadahar yoga	Bhasmas of shulbha, manashila, shuddha gandhak, swarnasindur	BBR-1
3	Chandranshu rasa	Shuddha parad & gandhak, bhasmas of loha, abhrak, vanga	BBR-2
4	Chandrodayo rasa	Shuddha parad & gandhak, bhasmas of abhrak, vanga	BBR-2
5	Trailokyachinatamani rasa	Bhasmas of swarna, roupya, abhrak, praval, mukta & parad	BBR-2
6	Sameerpannag(1)	Shuddha parad & gandhak, hartala, malla Bhasma	BBR-5
7	Panchamrit rasa(12)	Shuddha parad, gandhak, bhasmas of abhrak, swarnamakshik, loha	BBR-3
8	Vatarakshar rasa(1)	Shuddha parad & gandhak, bhasmas of loha, abhrak, tamra	BBR-4

Note. BBR: Bharat Bhaishajya Ratnakar (Volumes 1–5); Unmada: Insanity/Psychosis.

Table 3: Rasakalpas indicated in Apasmar.

Sr. No	Rasakalpas	Rasadravya bhasmas	References
1.	Chaturmukhrasa	Shuddha parad & gandhak, bhasmas of abhrak & Swarna	Siddhayogsangraha
2.	Vatakulantak rasa	Shuddha parad & gandhak, mrug nabhi	Siddhayogasangraha
3.	Amarsundari vati	Shuddha parad & gandhak, visha	BBR-1
4.	Amrutanam gutika	Shuddha parad & gandhak, bhasmas of abhrak, hingul and loha, halahal	BBR-1
5.	Shilajatu churna	Swarnamakshik bhasma, shuddha shailajatu	BBR-5

6.	Anandabhairavo rasa(3)	Shuddha hingul, gandhak and tankan, Visha	BBR-1
7.	Anandabhairavo rasa(4)	Shuddha parad, gandhak, hingul, tankan, Visha	BBR-1
8.	Indrabramha vati	Rasasindur, bhasmas of abhrak, tikshnaloha, roudya, tapy, shuddha gandhak	BBR-1
9.	Kalantako rasa(1)	Shuddha hingul, tankan & gandhak	BBR-1
10.	Chandrasurya rasa	Tuttha bhasma, shuddha parad & gandhak	BBR-2
11.	Sarivadi vati	Abhrak & loha bhasma	BBR-5
12.	Sutabhasmayoga	Parad bhasma	BBR-5
13.	Smrutisagar rasa	Shuddha parad & gandhak, bhasmas of hartala, manashila, tamra	BBR-5
14.	Panchloharasayana	Bhasmas of abhrak, kantalo, vanga, sisak	BBR-3
15.	Yograj gutika	Shuddha shilajatu, loha, roudya, swarnamakshik	BBR-4
16.	Rajmruganka rasa(4)	Shuddha parad & gandhak, bhasmas of roudya, abhrak, vaikranta, loha, sisak, vanga, hirak, gomeda, praval, vimal, manikya, hartala, panna, swarnamakshik, nila, shukti & shanka	BBR-4
17.	Vasantatilak rasa(2)	Bhasmas of loha, vanga, swarnamakshik, swarna, abhrak, praval, roudya, mukta	BBR-4
18.	Vatakulantak rasa	Kasturi, shuddha manashila	BBR-4

Table 4: Rasakalpas indicated as Medhya, Smrutikara, Bhrama, Buddhikara.

Sr. No	Rasakalpas	Rasadravya bhasmas	References
1.	Ashtavakra rasa	Shuddha parad & gandhak, bhasmas of tamra, naga, vanga, kharpara	BBR-1
2.	Amrutankur vati	Shuddha Parad, gandhak & vish, bhasmas of loha, abhrak, shilajatu	BBR-1
3.	Amlapitantako modak	Bhasmas of loha, swarna, kansya	BBR-1
4.	Shridamaranandabhrakam	Abhrak bhasma	BBR-1
5.	Chandramrut vati	Shuddha parad & gandhak, bhasmas of loha & tankan	BBR-2
6.	Jeernajwarankush rasa	Shuddha Parad, gandhak & visha, Bhasmas of sisak, Tamra, kantalo, vaikranta, hingul, tankan	BBR-2
7.	Jyotishmati rasayana	Shuddha gandhak	BBR-2
8.	Tripurasundaro rasa	Rasasindur, bhasmas of abhrak, swarnamakshik, mukta & swarna	BBR-2
9.	Triphaladi churna	Loha churna	BBR-2
10.	Trailokyataapharan rasa	Krushnaabhra satva, bhasmas of tankan, tuttha, vaikranta, rajavarta, manashila, kantalo,	BBR-2

		hingul, hartala	
11.	Nrupativallabhrasa	Shuddha parad & gandhak, bhasmas of abhrak, loha	BBR-3
12.	Panchamrit rasa(11)	Bhasmas of parad, loha, abhrak, tamra, vanga, sisak	BBR-3
13.	Maheshvar rasa(2)	Shuddha parad & gandhak, Bhasmas of loha, tamra, abhrak, swarna	BBR-4
14.	Makardhwaj (chandrodaya rasa)	Bhasmas of swarna, shuddha parad & gandhak	Siddhayogasangraha
15.	Mrityunjay rasa(3)	Bhasmas of swarna, roupya & heerak	BBR-4
16.	Rasayanamrut rasa	Shuddha parad & gandhak	BBR-4
17.	Rasaraj rasa	Rasasindur, bhasmas of abhrak, swarna, mukta, praval, loha, roupya, vanga	Siddhayogasangraha
18.	Vasantkusumakar rasa	Bhasmas of swarna, roupya, vanga, rasasindur, abhrak, praval, mukta	BBR-4
19.	Bruhatkshaykesari rasa	Bhasmas of abhrak, loha, parad, tamra, sisak, kanshi, mandur, roupya, vanga, kharpar, hartal, shankha, tankan, swarnamakshik, vaikranta, kantalo, swarna, praval, kapardik, hingul, loha	BBR-4
20.	Bramhi vati	Bhasmas of abhrak, akik, manikya, praval, swarna, mukta, kasturi	Siddhayogasangraha
21.	Sarwangasundar rasa	Shuddha parad and gandhak, bhasmas of swarna, abhrak, tankan, swarnamakshik, tamra, mukta, praval	BBR-5
22.	Shambukadya gutika	Bhasmas of shankha & loha, rasanjan	BBR-5
23.	Smrutikavallabho rasa (bruhad)	Shuddha parad & gandhak, bhasmas of swarnamakshik, abhrak, swarna, hartal, roupya, ahiphena	BBR-5
24.	Suryachandraprabha gutika	Bhasmas of swarnamakshik, abhrak, loha, shuddha shilajatu	BBR-5
25.	Swarna sindur	Shuddha parad & gandhak, swarna bhasma	BBR-5

DISCUSSION

Thirty-four rasakalpas have kajjali, i.e Shuddha parad and gandhak; 32-30 formulations contain loha and abhrak (mica) bhasmas, respectively, whereas 18 formulations have swarna bhasma. 8 formulations contain sudha varga dravyas (praval, mukta, shankha and shuktik),

11 formulations have *kupipakwa rasayana* like *rasasindur*. 6 Formulations have *shilajit*. *Malla varga* like *hartala* and *manashila* are present in 6 and 7 formulations. The probable mode of action with *in vitro* and *in vivo* studies of some *rasadravyas* is explained in Table 5:

Table 5: Mode of action with *in vitro* and *in vivo* studies of *rasadravyas*.

Sr. No.	Rasa-dravyas	Mode of action
1.	Swarna bhasma	<i>VyadhibhirNaChaDrusyate, ParamMedhavi, Srutadhara</i> are mentioned for <i>Swarna Bhasma</i> in <i>granthas</i> . It has the ability to open the tight junctions between cells for uptake. Gold nanoparticles, usually smaller than 58 nm, have reached various organs through the bloodstream. Classically prepared <i>Swarna bhasma</i> is approximately 28-35 nm in size, so it can reach the affected site when taken orally through intestinal absorption, and it might be able to release Au (I) x in a sustained manner, which is necessary for its therapeutic action. It crosses the blood-brain barrier, potentially protecting neurons from oxidative stress. According to research, <i>Swarna Bhasma</i> has significant antioxidant properties which help combat free radicals and avoid oxidative stress. Research has demonstrated its neuroprotective properties, highlighting its potential for treating neurodegenerative diseases and improving cognitive function. ^[7]
2.	Rasasindur	In a comparative neurotoxicity study between mercuric-based inorganic compounds HgCl ₂ and <i>rasasindur</i> (<i>in vivo</i> study) on behavioural and cortisol levels-RS treated group showed a significant increase in speed by 33%, decrease in meander by 20%, decrease in freeze points by 30%, and insignificant alteration in cortisol levels. ^[8]
3.	Roupya bhasma	A case series of 10 patients with therapeutic efficacy of <i>Rajata Bhasma</i> with <i>shankhapushpi</i> (<i>Convolvulus pluricaulis</i>) syrup. Subtests like remote memory, attention, concentration, delayed and immediate recall, verbal and visual retention were statistically improved. ^[9] It has been reported that silver nanoparticles reduce brain inflammation and related neurotoxicity through induction of H ₂ S-synthesizing enzymes. ^[10]
4.	Tamra Bhasma ^[11]	It may act in <i>apasmar</i> by balancing <i>vata - kapha doshas</i> , enhancing memory & intellect, and improving mitochondrial scavenging of free radicals. An <i>in vivo</i> study in rats (0.5mg/100g dose) measured over 7-30 days showed significant antioxidant effects, preservation of glutathione, and augmentation of the SOD activity (superoxide dismutase) crucial in mitigating seizure-related oxidative neuronal damage.
5.	Loha Bhasma ^[12]	The transition metal iron exerts essential roles in the CNS for oxygen transport, myelin formation, and synthesis of neurotransmitters. Also, limited access to iron leads to systemic iron deficiency that may affect the iron levels in the CNS and PNS, which can cause cell growth arrest or even cell death. The higher expression of transferrin receptor in the soma of the regenerating motor neurons indicates that the uptake of iron took place within

		the CNS.
6.	<i>Swarnamakshik Bhasma</i> ^[13]	It is considered <i>tridoshagna</i> , <i>Medhya</i> , <i>balya</i> & has unique neuroprotective, metabolic and Antioxidant action in <i>apasmara</i> .
7.	<i>Haratala Bhasma</i> ^[14]	An anticonvulsant action as described by an experimental study conducted on <i>Albino rats</i> (<i>In vivo</i> method).
8.	<i>Manashila</i> ^[15]	<i>Rasa Tarangini</i> mentions <i>Manashila</i> as a potent ingredient in <i>Anjana</i> for <i>Apasmara</i> , often combined with <i>Saindhav</i> , <i>honey</i> , <i>kapota vitta</i> , indicated particularly where <i>Kapha</i> and <i>Tama</i> are predominant. Often referred to as part of " <i>Teekshna anjana prayoga</i> "-used in emergencies to revive consciousness. When used as <i>Anjana</i> , <i>Manashila Bhasma</i> acts on the optic-brain pathway, stimulates cranial reflexes, clears <i>Kapha-Tama</i> , and activates the nervous system, making it effective in restoring consciousness and controlling seizures in <i>Apasmara</i> .
9.	<i>Kasturi</i> (<i>Mrugrabhi</i>)	Musk alleviated the behavioral changes caused by CUMS (Chronic unpredictable mild stress) and reduced elevated corticosterone levels. Musk has an antidepressant-like effect in an animal model of depression. ^[16]
10.	<i>Shuddha Shilajit</i>	A study of the neuroprotective effects of 3 samples of <i>Shilajit</i> was examined using neuroblastoma cell lines and cell viability assays by an A β -induced cytotoxicity model (<i>in vitro</i> study) ^[17] <i>Shilajit</i> contains humin, humic acid, and fulvic acid. Fulvic acid, being the main component of <i>Shilajit</i> , was reported to prevent the accumulation of tau protein in neurodegenerative diseases. ^[18]

CONCLUSION

Rasaushadhis consist of *kajjali*, which act as *srotosukshmagami* and destroy *strotavarana* (obstruction in *strotas*) and do *strotoshodhan* (removal of *strotavarana*) to restore mental equilibrium, enhance cognitive function, and pacify vitiated *doshas*. In a review of *Unmada Gajakesari Rasa*,^[19] in which *Shuddha gandhak* acts in *chittavibhrama*(confusion), does *deepana*(appetizer) to remove *srotoavarana*, mercury crosses the BBB, deposits in the brain, thus altering multiple cellular functions, and *shuddha manashila*, used as a sedative, acts as an NS depressant by potentiating the activity of GABA. Thus, proving them as antipsychotic and anti-epileptic after prolonged use without any catalepsy (adverse effects). Not all the classical formulations have been studied clinically and are unavailable in the market; hence, standardization of these classical formulations is needed. There are many modern antipsychotics like Aripiprazole and Cariprazine with side effects i.e clinically significant weight gain, treatment-emergent mania, clinically significant fasting glucose level, hypotension, suicidal ideation, sedation, etc.^[20] Thus, there is need of new agents, classical formulations as *Medhya* which may have the potential to replace current antipsychotic, antiepileptic agents and also this review will be useful for research and manufacturing purpose. Since this is a review article, a limitation of the study is that there are very few

formulations with clinical evidence against mental disorders. This review is performed using specific compilatory classical texts and not all the Ayurvedic texts.

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