

**ABRAKA BHASMA AS RASAYANA IN GERIATRIC CARE AND CURE –
A REVIEW IN PRESENT SCENARIO**

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ABSTRACT

In the current scenario, the covid-19 pandemic had the greatest health impact on the older population. The aged population is susceptible to serious infections and has a high mortality rate due to variables like diminished immunity and pre-existing co-morbidities like hypertension, cardiovascular disease, and diabetes. It is currently considered vital to design newer geriatric healthcare strategies. *Ayurveda* offers a wide range of preventive strategies to slow down the ageing process. The *Rasayana* works not only by cease aging process but also by enhancing the body's power to prevent disease manifestation and *Abhraka bhasma* is one such unique mineral formulation. The aim of the study is to review available articles and data about *Abhraka bhasma* and interpret its effect on post covid complication in geriatric cases, act as a *Rasayana* (rejuvenate) as well as *Vyadhiharana* (disease curing) *Aushada*.

The review was done to find out the effect of *Abhraka bhasma* as *rasayana* in geriatric cases with complications of post covid syndrome or long covid complications which is need of the hour. The therapeutic utility of *Abhraka bhasma* explained by our *Acharya* were reviewed with the complications present in post covid cases and geriatric syndrome. *Abhraka bhasma* and its Haematinic, Anti-helminthic, neurobehavioral activity, oxidative stress, hypoglycaemic activity were reviewed from different articles. Thus we can effectively conclude *Abhraka bhasma* is a wonderful *Rasayana dravya* with a wide range of therapeutic characteristics and plays an important role in this present scenario Therefore, it is important to choose medications carefully in order to maintain the *vyadhiharana* and *Rasayana* qualities.

Keywords: *Abhraka bhasma*, Geriatric care, *Rasayana*, Post covid complication, Long covid

INTRODUCTION: Aging is both a complex and difficult scientific problem and a universal source of concern. Aging is characterised as a cumulative breakdown of the body's homeostatic adaptive response in modern science. It is also defined as the inherent, irreversible, and age-related loss of viability that makes us more vulnerable to a variety of diseases and death, as well as a steady functional decline of physiological function as well.

^[1] If the functional capacity at the age

of 30 is taken as 100% then there is a measurable decline at 60 years: 15% decline in Nerve conduction velocity, 20% decrease in resting metabolic rate, 40% decline in Glomerular rate and 50% reduction in Vital capacity of lungs. ^[2]*Jara* or *Vardhakya* is regarded by *Ayurveda* as a natural and unavoidable process and is considered as *Swabhavaja*. Practically every philosophical, mythological, and artistic work from that time period uses this phrase. The word "Sramsu

adahpatane," which denotes a decline or retardation in the bodily, physiological, and psychological well-being.^[3] *Charaka* describes that there is a causative factor for the manifestation of a being but there is no cause for the cessation of this manifestation, since death following birth is a state of natural flow.^[4] It is important to note that the term "*Rasayana*" does not refer to a treatment only for the elderly. From paediatrics to geriatrics, it can be used. According to *Susruta*, *Rasayana* is a practise that prolongs good health, enhances mental abilities, and gives resistance and immunity to sickness. According to *Charaka*, the techniques of providing the *Dhatu*s with the best nutrition are known as *Rasayana*.^[5] It is a kind of *Ayurvedic* clinical medicine which emphasizes on avoiding the consequences of ageing.

The importance of this article in the current scenario is the covid-19 pandemic which had the greatest health impact on the older population. The aged population is susceptible to serious infections and has a high mortality rate due to variables like lowered immunity and pre-existing comorbidities like hypertension, cardiovascular disease, and diabetes. Due of the corona virus's long-term effects, elderly patients may experience post-covid problems. Therefore, in order to avoid long-term or post-covid problems in these geriatric covid patients, a good *rasayana* therapy is highly important following adequate treatment. In order to choose *Abhraka Bhasma* as a *rasayana* medicine in geriatrics and the elderly following COVID problems, research studies on *Abhraka Bhasma* and formulations including *Abhraka Bhasma* from various academic articles are evaluated in depth.

ABRAKA BHASMA : According to *Ayurveda*, *Abhraka* is classified into four types, which are *Pinak*, *Naag*, *Manduk*, and *Vajra*.^[6] Again, it can also be categorized according to the available colours into four types, i.e. Yellow, White, Red and Black.^[7] *Bhasma*, is an *Ayurvedic* metallic/mineral preparation, treated with herbal juices or decoction and exposed for certain quantum of heat.^[8] Typically, any *bhasma* is prepared through *Shodhana*, (purification) *Bhavana* (levigation or wet grinding) and *Marana* (calcination) processes. These many stages of treatment guarantee that *bhasma* are nontoxic when used in therapeutic doses.^[9] The particle size of *Abhraka bhasma* has been reported to be around 29 and 88 nanometres.^[10] *Abhraka bhasma* comes in a variety of grades that are used to cure a variety of diseases and as a component in various rejuvenating formulas.

ABHRAKA BHASMA GUNA

1. RASA RATNA SAMUCHAYAM

Mica is (like) supreme ambrosia, it destroys (diseases of) *Vāta* & *Pitta* & disease *Kshaya*. It enhances intellect, pacifies pain, it is aphrodisiac, promotes the life span, it increases strength, it has property of oleation, it stimulates taste & though of cold potency, does not increase *Kapha*, when used along with other medicines, it is able to cure all diseases. It also binds the Mercury.^[11]

GERIATRIC SYNDROMES^[12]

A complex symptom presentation that is typical in older persons is referred to as a geriatric syndrome.

Common Geriatric problems include -

- Dementia and Delirium
- Fall
- Urinary Incontinence
- Decreased sleep

- Constipation.

Dementia is a state of deterioration that occurs over time and affects both cognitive ability and functioning ability. It is a persistent condition of perplexity. Delirium is an acute state of confusion. Both dementia and delirium are characterized by Disorientation, Memory impairment, Paranoia, Hallucinations, Emotional lability, Sleep-wake cycle reversal.

Falls in old age are those that do not include syncope, stroke, or seizure-related falls. The frequency and danger of injuries from falls rise with age. Most falls include multiple factors. It can occasionally be a sign of another illness, such as an infection, a neurological issue, a drug side effect, or physiologic changes brought on by ageing. Muscle weakness, irregular gait or balance, the use of a walking assistance, visual impairment, and arthritis are risk factors for falls.

For older persons, urinary incontinence is a big issue. It affects women twice as frequently as males up until the age of 80. Both sexes are equally impacted after the age of 80. Age, functional impairment, dementia, obesity, smoking, mood disorder, and constipation are all risk factors.

Current Scenario - Long Covid / Post Covid Complication ^[13]

According to the WHO, it typically takes people 10 to 14 days or longer to fully recover from an illness. ^[13] Mild to moderate case of covid-19 recover in about 14 days. Covid-19 effects can occasionally last for up to 45 days, or longer than 20 days [14]. Patients may experience post-COVID problems due to the long-term effects of the coronavirus. Coronaviruses raise the risk of long-term health problems because they can harm the kidney, heart, lungs, brain, blood vessels, skin, and

nerves. Even so, the virus could still be present in the body three months after the diagnosis. Even though some persons may experience a second positive test result after recovering, this does not necessarily mean the virus is still contagious. People who have moderate symptoms that persist after they have recovered are said to have post-covid syndrome or long-covid, and they may experience post-covid disorders as well as long-term issues that affect the organs. People may develop post-covid problems more than 28 days (4 weeks) after initially contracting the coronavirus. These include a wide spectrum of new, persistent, or reoccurring health concerns. ^[13] The risk of post-covid problems is higher in the elderly population and in persons with major medical illnesses such as diabetes, immune system abnormalities, malignancies, or chronic diseases. ^[13]

As per recent reports, possible long covid causes identified in patients recovered from COVID-19 may include: ^[13]

- Reduced or lack of response from the immune system,
- Re infection of the virus,
- Multisystem inflammatory syndrome (MIS),
- Prolonged hospitalization due to severity,
- Post-traumatic stress

Following recuperation, common post-covid problems symptoms that include: ^[13]

- Fatigue, Feeling of tiredness, feverish feeling
- Shortness of breath or difficulty breathing
- Cough or Chest pain
- New onset diabetes
- Myalgia (muscle pain) for long period
- Inability to focus or difficulty thinking or a lack of mental clarity (brain fog)

- Rapid or fast heartbeat (heart palpitations),
- Insomnia, anxiety disorder or depression

EFFECT OF POST COVID COMPLICATION ON TRIMARMA ^[14]

Heart - Heart patients who recovered from COVID-19 symptoms showed irreversible tissue death in the heart muscle, even in those who only had mild symptoms. This could make myocardial infarction riskier.

Brain-There are numerous reports of young people with COVID-19 also exhibiting neurological symptoms, such as muscle weakness, tingling or numbness in the hands and feet, and the potential to develop Guillain-Barré syndrome, which results in paralysis. Other neurological symptoms include dizziness, sudden blackouts, confusion, delirium, seizures, and stroke. The development of Parkinson's disease and Alzheimer's disease may also be made more likely by COVID-19.

Acute kidney damage, often known as sudden loss of renal function, can occur in kidney patients who have COVID-19. In severe cases, dialysis may be required, however kidney damage of this kind is occasionally reversible. CKD patients are more likely to experience severe symptoms after COVID-19 recovery. Therefore, it's crucial to take all essential steps to avoid infection.

STUDIES ON ABHRAKA BHASMA

1. Gigi Mathew- Evaluation of Haematinic effect of *Guda Marita Abhraka bhasma*-An Experimental Study ^[15]
2. Anti-helminthic effect of *Abhraka Bhasma* prepared with *Kumari swarasa* experimental study. ^[16]
4. In vivo hypoglycaemic activity of *Abhraka bhasma* by alloxan induced method. ^[17]

5. Evidence for safety of Ayurvedic herbal, herbo-metallic and *Bhasma* preparations on neurobehavioral activity and oxidative stress in rats. ^[18]

6. The effect of *Abhraka bhasma* on in vivo CCL4 induced hepatotoxicity and nephrotoxicity. ^[19]

7. Testicular oxidative stress protective effect and *Abhraka bhasma* showed has a defensive effect in heat-induced oxidative stress in rat testicular cells. ^[20]

8. Effect of *Abhraka bhasma* (4mg in formulation) for oral treatment of Acne vulgaris. ^[21]

9. Effect of *Abhraka bhasma* in lipid profile in rats and found anti-hyperlipidaemia. ^[22]

12. *Abhraka bhasma* Induces the secretion of insulin from pancreas, hence used in the treatment of Type I Diabetes mellitus. ^[23]

13. Tamhankar Yogesh et al – In vitro Immunomodulatory Activity of Shataputi Abhrak Bhasma in Nitro Blue Tetrazolium Test ^[24]

RESULT

1. *Abhraka bhasma* – as a *rasayana*

In *Rasa Ratna Samuchaya* ^[25] Acharya has explained the properties of *abhraka bhasma* in the initial phase of the chapter.

- Acharya first referred to *abhraka* as *gouri theja parama amritam*, suggesting its significance as a *rasayana dravya*. It makes reference to a patient's body achieving *dhatu sarata* and *ojus*.
- *Pranja bodhi*- is that which bring awareness to the body. It could take place at the tissue or cellular level. The aetiology of a number of illnesses disrupts the body's *pranja*. *Abhraka* can be called *pranja bhodi*, that which aids the body in regaining its physiological attitude. This *guna* of *pranja bhodi abhraka bhasma* works well as a *Rasayana* in delirium and geriatric dementia.

- *Prasamitham rujam* - The word '*rujam*' can be interpreted as *vyadhi*, *abhraka bhasma* can be characterized as something which relieves *vyadhi*, pain, and discomfort in geriatric patients.

- *Vrisyam ayusyam agryam*- *vrisyam* demonstrates its aphrodisiac properties, indicating that the individual attain proper development of all *dhatu*s. The term "*Ayusyam*" signifies "longevity of life." This is an essential quality for a *Rasayana dravya*. As a result, Acharya considered *Abhraka bhasma* to be the most significant medicine for achieving longevity.

- *Balyam*- is a term which means "to gain strength in oneself." Here, the patient gains strength in body, mind, and *ojus*. It refers to a person's attainment of *samyak pusti*, and *dhatu*sarata.

- Maintaining the equilibrium of *tridhoshā* in the body, which is highly important in a *rasayana dravya*, is what *vata pitta ksayagnam* and *akapham* denotes. This will benefit senior citizens' overall health and be used to treat *jara janya vyadhi*.

- *Snigdham*- Patients who are on medicine for dyslipidaemia or hypercholesterolemia are hesitant to take any *ahara* or *aushada dravya* which is *atisnigdha* like *gritha yogas*, *snigdha guna* is highly important for good brain functioning or to protect the brain from age-related atrophic changes, maintenance of *saptha dhatu* and to achieve this *snigdha guna* without aggravating *kapha pradhana vyadhi*, can only be obtained by *abhraka*, hence as a *rasayana dravya* it is critical.

- *Ruchitam* aids in the attainment of *indriya prasada* and the cure of anorexia in patients. *Deepana* quality can keep

Jadaragni, *Dhatuagni*, and *Boothagni* alive. It stimulates all three *agni* and aids in the effective flow of a person's metabolism. *Aruchi* and *ajeerna* are two major problems that can be easily treated in geriatric groups.

2. *Abhraka bhasma* - to treat post-covid problems.

When looking at the causes of post-Covid complication, the anti-helminthic property of *Abhraka bhasma* can be used to treat virus re infection and its retention in the body of the patient for up to 3 months.

- *Abhraka bhasma*'s antioxidant and immunomodulatory characteristics can aid to recover and rebuild immune system response that has been weakened by long-term viral infection and prolonged antibiotic and steroidal medication during the course of treatment.

- The majority of post-covid symptoms can be easily managed by the therapeutic efficacy of *Abhraka bhasma* with appropriate *anupana*.

- New onset diabetes is a problem that is commonly encountered in post-covid instances, It can be treated with *abhraka bhasma* because the cells' *pranaja bhodana* can be restored for adequate insulin synthesis with appropriate *bhavana dravyas*. Likewise other symptoms like cough, shortness of breath, brain fogging can be managed accordingly with suitable *anupanam* which is selected from the therapeutic point of view.

CONCLUSION: In the current situation, older patients who had covid infections that were light, moderate, or severe and that were successfully treated by modern medicine come forward and ask for assistance with post-covid care or therapy for post-covid sequelae from *Ayurveda*. Long-term covid-19 infection can cause

damage to various organs, including the lungs, brain, blood vessels, skin, nerves, kidney, and heart. Secondary to the condition, this might be recognised as metabolic, musculoskeletal, cardiovascular, and neurological problems.

On reviewing the above studies and articles about *abhraka bhasma*, we can effectively conclude *abhraka bhasma* is a wonderful *rasayana dravya* with a wide range of therapeutic characteristics and plays an important role in this context. As a result, careful drug selection is required to ensure that the *rasayana* and *vyadhiharana* qualities are preserved. As we keep in mind, medication should maintain *Swastha's* health while also healing *Athura's* illness.

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