

Review article

Critical Review on Pharmacodynamic action of *Prawal Panchamruta Ras*

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ABSTRACT:

Ayurveda, the ancient health science, includes formulations of plants, minerals and animal origin. *Rasashastra* and *Bhaishajya kalpana* is two of the pharmacotherapeutic branch of Ayurveda which deals with herbo-mineral formulations. The main advantages of *Rasaushadhi* are its potency, effectiveness, and longevity. The classic Indian system of health management, Ayurveda, suggested different approaches for the restoring normal health. According to Ayurveda, natural drugs exert their action through their *Rasa, Guna, Virya, Vipaka, Prabhava*. These properties of drugs contribute towards the pharmacodynamic profile of any ayurveda drugs. The term "pharmacodynamics" refers to the process of "what the drug does to the body," representing the pharmacological action of the drug.

KEYWORDS: *Prawal Panchamruta Ras, Amlapitta, Parinam shool, Osteoporosis*

INTRODUCTION:

Prawal Panchamruta Ras contains *Mukta, Shankh, Shukti, Prawal* and *Kapardika*. *Madhur tikta rasa, madhur vipaka*, and *sheeta virya* are present in all of these *dravyas*. These *dravyas' sheeta guna* and *madhur vipaka* aid in lowering *vidagdha pitta*. Chemically, the

calcium carbonate (CaCO₃) in *Prawal Panchamruta Ras* quickly neutralizes stomach acid and may stop reflux, indicating a different mode of action from acid neutralization. In addition to being a useful antacid, calcium carbonate contains bio-organic calcium.

MATERIALS AND METHODS:

MATERIALS:

Table No. 1: Ingredients of Praval Panchamrut Ras

Sr. No.	Drugs	Latin/English Name	Praman
1.	<i>Mukta bhasma</i> ^[5,10]	<i>Bhasma</i> of Pearl	1 Part
2.	<i>Shankh Bhasma</i> ^[6,11]	<i>Bhasma</i> of Conch Shell	1 Part
3.	<i>Shukti Bhasma</i> ^[7,12]	<i>Bhasma</i> of Pearl Oyster	1 Part
4.	<i>Kaparda Bhasma</i> ^[8,13]	<i>Bhasma</i> of Cowries	1 Part
5.	<i>Praval Bhasma</i> ^[9,14]	<i>Bhasma</i> of Coral	2 Part
6.	Latex of <i>Arka</i> ^[15]	<i>Calotropis Procera</i>	Up to the absorption capacity

Procedure:

1. This is *kharaliya kalpa* (Prepared by trituration in *khlva yantra*)
2. All *Bhasmas* are taken in proportion mentioned in table no. 1 and mixed properly.
3. One *bhavana* of *Arka ksheer* is given properly.
4. *Chakrika* prepared and one *gajputa* is given.
5. After *swangsheet* (self-cooling) the prepared drug triturated in *khlwayantra* to get very fine powder.

Study Design:

- A. Review of properties of all ingredients of *Prawal Panchamruta Ras* along with its preparation.
- B. Review of *samprapti* (Etiopathogenesis) of diseases and pharmacodynamic action of *Prawal Panchamruta Ras*.

A. Review of properties of all ingredients of *Prawal Panchamruta Ras* along with its preparation.Table No. 2: Ingredients of *Prawal Panchamruta Ras* and their properties

Sr. No.	Drugs	Rasa	Virya	Guna	Strotogamitva
1.	<i>Mukta Bhasma</i> ^[5,10]	<i>Madhura</i>	<i>Sheeta</i>	<i>Raktaprsadak, Mutral, Shamak</i>	<i>Rasvaha</i>
2.	<i>Shankh Bhasma</i> ^[6,11]	<i>Katu</i>	<i>Sheeta</i>	<i>Pachak, Grahi, balvardhk</i>	<i>Annavahtotas</i>
3.	<i>Shukti Bhasma</i> ^[7,12]	<i>Madhura</i>	<i>Sheeta</i>	<i>Ruchikar, agnideepk, Pachak</i>	<i>Pranvah, Annavh</i>
4.	<i>Kaparda Bhasma</i> ^[8,13]	<i>Katu</i>	<i>Ushna</i>	<i>Ushna, deepan</i>	<i>Annavaht</i>
5.	<i>Praval Bhasma</i> ^[9,14]	<i>Madhur, Amla, Kashaya</i>	<i>Sheeta</i>	<i>Sheet, pittakaphnashk</i>	<i>Raktavah</i>
6.	<i>Latex of Arka</i> ^[15]	<i>Katu, Tikta</i>	<i>Ushna</i>	<i>laghu, Ruksha, Tikshna</i>	

Procedure:

- All ingredients mentioned in table No.2 are mixed homogenously and one *bhavna* of *Arka ksheer* is given.
- Chakrika* prepared and one *gajputa* is given.
- After *swangsheet* (self-cooling) the prepared drug triturated in *khlwayantra* to get very fine powder.

Organoleptic Properties

Appearance	- Greyish white
Smell	- Odourless
Taste	- Slight <i>Madhur</i>
Sparsha	- Fine powder (<i>shlkshna</i>)
Dose	- Oral 1-2 <i>gunja</i> (125mg -250mg)
<i>Anupana</i>	- 1. Sugar +water; 2. Milk +sugar
<i>Sevankal</i>	- Morning & evening <i>Bhojanpurva</i> (Before meal)

B. Review of *Samprapti* (Etiopathogenesis) of diseases and pharmacodynamic action of *Prawal Panchamruta Ras*.*Amlapitta*^[2]

Amlapitta is a *pittaj pradhan vyadhi* affecting the *Annavaht* and *Purishvaha Srotas*. It occurs due to *mandagni* (weak digestion) and *ama* (undigested toxins). In *Amlapitta*, the *Amla* and *Tikshna guna* of *pitta* increase, leading to improper digestion and the formation of *ama*. As a result, bloating occurs frequently, accompanied by increased pain. *Prawal Panchamruta Ras* absorbs the excessive *dravta* (fluidity) of *pachaka pitta* due to its *Ruksha* (dry) and *Grahi* (absorbent) gunas. The *madhur, katu, and kashaya rasas* of *prawal, shankh, shuktik, and kapardik*, along with the presence of bio-organic calcium carbonate, neutralize excess gastric acid. Epigastric and retrosternal pain (reflux gastric acid), regurgitation, and bloating are the main symptoms of *Amlapitta*. *Prawal Panchamruta Ras* protects the mucosal layer, reducing acid erosion. Additionally, the *Deepan* and *pachan gunas* of *Arka ksheer* enhance digestion and control excess acid secretion.

Parinam Shoola^[3]

The "*Parinama shoola*" is self-explanatory; it refers to abdominal colic that develops during food digestion, or 3-4 hours after ingestion, when food has entered the intestine. An "*Avarana Janya, Tridoshaja Vyadhi*" manifests as *Parinamashoola*. Excessive vitiation of *Vata* occurs after ingesting or being exposed to the causes of *Vata* aggravation. These two *Doshas* then obstruct this vitiated *Vayu* resulting in its mixing with *Pitta* and *Kapha*. When *Vata* is mixed with *Pitta* and *Kapha* and obstructed, it leads to severe *Shoola*. This condition is known as *Parinama shoola*.

In *Parinam shool*, *Pittapradhan Tridoshas* become distorted. Major symptoms like *shool*(pain), heaviness are visible in the patient. This occurs due to excess *drava guna* of *pitta* and *kapha* along with *vikrut gati* of *vayu*. Due to the *grahi guna* of *Prawal Panchamrut Ras* it absorbs excess *dravansh* and balances acidic secretion. This helps to control the *Shool*. In some patient, *Shool* is due gastric and peptic ulcers. *Shit guna* of *Prawal Panchamrut Ras* neutralizes excess acid secretion and helps in ulcer healing.

Aphyta in *Parinam shool* includes buttermilk, curd, salt and chillies while *Pathya* foods are *Laghu, Madhur, sheeta aahar*, milk, ghee etc. The formulation acts by its *deepan, pachan* (digestive) properties along with *shulaghna guna* of *shankha, shuktik, kapardik* and *tikshna ushna sarak guna* of *arka ksheer* ultimately reducing the *tikshna, ushna, and drava guna* of *pitta*.

Asthiakshya / osteoporosis^[4,16]

Asthiakshya smprapti includes vitiation of *Vata* occurring through two ways: *Dhatukshhya* and *Margarodha*. Therefore, the *Samprapti* can be explained in two ways, one is *Dhatukshyayanya* and other is *Margavarodhajanya*. *Apatarpan* i.e., taking *Vataprakopak Ahara* (diet) and *Vihara* (living habits) lead to vitiation of *Vata* due to decrease in *Dhatu*, resulting in the *Srotas* becoming *Rikta* (devoid of unctuousness). Vitiated *Vata* fills the *Rikta Srotas*. The walls of the *Srotas* stretch due to the force of *Vata* weakening them, and vitiated *Vata* overpowers the weak *Srotas*, leading to the manifestation of disease.

Praval Panchamrit Ras is useful in *Dhatukshyajanya asthikshya*. In *Prawal Panchamruta Ras*, the contents are derived from *Ratna* and *Sudha varga*, which serve as a rich source of Bio-organic calcium. Osteoporosis occurs when there is a decrease in the creation of new bone due to the rich source of bioorganic calcium, which gets easily absorbed in the body and prevents degeneration of bones. *Praval Panchamrut Ras* is one of the best medicines for osteoporosis in children; it improves bone growth. Its effectiveness is attributed to the properties of *praval*, *kapardik*, *shankha*, *shuktik Bhasmas guna* and along with *anupan* like milk, ghee.

OBSERVATIONS AND RESULTS:

In *Amlapitta*, *Praval Panchamrut Ras* acts through its *madhur*, *katu*, and *kashy rasas*, as well as the *ruksha* and *grahi gunas* of *shankha*, *shuktik*, *kapardik*, and the *tikshna guna* of *Arka ksheer*. For managing *shool* (pain), it utilizes its *deepan*, *pachan*, and *shoolghn gunas*, along with the *grahi guna* of *praval*, *shuktik*, and *kapardik bhasma*, effectively absorbing excess *dravata* and reducing acid secretion. Additionally, *Praval Panchamrut Ras* can be used to treat osteoporosis in children and elderly patients due to its *madhur* and *katu rasa*, as well as the *snigdha grahi guna* of *praval*, *kapardik*, *shankha*, and *shuktik Bhasma*. Moreover, it provides bio-organic calcium

DISCUSSION:

Praval Panchamrut Ras is described in *Raschandanshu*. The drugs in this formulation are from *Sudha* and *Ratana varga*, which possess *Grahi*, *deepan*, *Pachan*, and *Sheet Guna*. They are also known for their *Raktaprasadak*, *deepan*, *Pachak*, and *Grahi gunas*. Hence, they are useful in diseases like *Amlapitta*, *Shool*, and *Osteoporosis*. To enhance its properties, *anupans* like sugar water and milk are given. In this article, we attempt to explain the pharmacodynamic action of *Praval Panchamrut Ras*.

CONCLUSION:

Praval Panchamrut Ras is the best drug for *pittapradhan* and *kapha pradhan* diseases. It can be used in conditions like *Amlapitta*, *Shool*, and *Osteoporosis*. *Praval Panchamrut Ras* acts on *pachak pitta* by absorbing excess *dravata* and improving digestion through its *deepan and pachan gunas*, which are present in *Arka ksheer*. It is concluded that substances with properties like *Ruksha*, *Laghu*, *Sheet*, and *Grahi* have effects in decreasing the vitiated *Dravata* of *pitta* and maintaining the function of *Agani*. Additionally, it serves as a natural source of bio-organic calcium, which gets absorbed in the body and reduces *asthikshy*

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