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Review Article

**PANCHAGAVYA GRITHA – A PROMISING DRUG IN
AYURVEDIC PSYCHIATRY**

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ABSTRACT

Psychiatry or Bhootavidya is one of the eight speciality branches in Ayurveda. The functions of the mind with its abnormalities have been effectively discussed in this Ancient science. Many a disease explained in modern psychiatry are well discussed under the umbrella term “Unmada” in Ayurveda. The various psychiatric problems have been approached with not only medicine, but also scientific procedures like counselling and psychotherapy. This area has been termed as ‘Satwapachaya chikitsa, the preliminary form of modern psychotherapy. Ayurvedic parlance is really a treasure of several therapeutic combinations advisable in Psychiatric conditions. Of the many drugs mentioned in the management of psychiatric disorders, Panchagavya gritha is the commonly used one. Many of the combinations are in the form of gritha or medicated ghee. Several drugs are being handled on in clinical practise with positive claims. Panchagavya gritha is mentioned in the management of Apasmara or epileptic syndrome. In clinical practise, the drug seems effective in conditions like schizophrenia, Depression, Attention deficit Hyperactivity disorder, types of epilepsies, post traumatic dementia etc. This paper is an attempt to study the drug, Panchagavya gritha in detail. The constituents of the yoga have been separately assessed for their characteristics and pharmacological action. A few studies conducted in our institute are also showing promising results. The details of the study are also discussed here. The mode of action of the Panchagavya gritha is also being tried to explain in an Ayurvedic manner. It was observed that Panchagavya gritha is effective in conditions like schizophrenia, cognition in Autism, OCD in the improving the quality of life.

Key words- Panchagavya gritha, Bhootavidya, Apasmara, OCD

INTRODUCTION

The subject of drugs is as old as diseases. Illness has been man’s concern from the beginning of his existence and the search for a remedy also begins there. The word drug is derived from the French word ‘drogue’, a dry herb. A drug is defined as any substance used for the purpose of diagnosis, prevention, relief or cure of a disease in man and animals [1].

Drug study has undergone a phenomenal growth in the last century. A critical review of the drug in a combination gives a detailed account of various pharmacological actions and an independent and critical outlook for its judicious use. While doing this, it is essential to give the relevant information from other disciplines like *pharmacology* and *applied physiology*. Many Ayurvedic texts which give excellent information about therapeutic uses of a combination of drugs have little explanation for their pharmacological actions.

Pharmacodynamics is the quantitative study of biological and therapeutic effects of drugs ie. what the drug does to the body.[2] The

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changes that a drug undergoes in the body and its ultimate excretion are considered as the fate of the drug. After absorption, drugs could undergo three possible fates.

- They could be metabolized by enzymes.
- They could change spontaneously into other substances without intervention of enzymes.
- They could be excreted unchanged.

According to Ayurveda, action of a drug is based on its guna, veerya, vipaaka and prabhaava. These as themselves or as combinations determine the status of drug action in the body. Fate of the drug always depends on rasapancaka and it goes in line with modern pharmacodynamics.[3] Besides that the drug action also depends the action of agni on that particular drug.

Most of the Ayurvedic drugs act only after absorption and are said to have systemic or general action. Many a time, the term 'action' and 'effect' of a drug are used as synonyms. However, initial drug-cell interaction is often termed as action and the events that follow are called drug effects.

The science of Ayurveda is a treasure of medicines of the plant, animal and mineral origin. Apart from single drugs, it makes use of combinations of wide range comprising of plant, animal and mineral origin. Many a drug has been mentioned in Ayurvedic psychiatry. Panchagavya gritha is mentioned in Apasmara chikitsa. It is one of the commonly used yogas not only for apasmara, but also many other

psychiatric conditions including OCD, zDepression and types of Schizophrenia.

Ingredients [4]

The combination contains 5 ingredients.

गोशकृद्रसदध्यम्लक्षीरमूत्रैः समैर्घृतं

सिद्धंपिबेदपस्मारकामलाज्वरनाशनम् (च.सं.चि.

१०/१७)

- Gos'akr't (Cow dung)
- Godadhi (Curd)
- Goksheera (Milk)
- Gomootra (Cow's urine)
- Goghr'ta (Ghee)

All the drugs are taken in equal quantities and the gritha is prepared as per the common preparatory techniques regarding gritha.[5]

Drug profile

• Goksheera (Milk)

Rasa : Madhura
Guna : Snigdha, Guru
Veerya : S'eeta
Vipaaka : Madhura
Dosha karma : Vaata, pitta samana, Kaphavardhaka.

Milk enhances ojus, nitrifies dhatus, sexual enhancer, rasaayana, improves cognition. It is indicated for debilitating conditions and can be used for convalescence. Cow's milk is a rich source of essential ingredients necessary for the physical and mental health of human beings and hence regarded as a balanced diet.

• Godadhi (Curd) [8]

It is a milk product obtained by coagulation of milk protein.

Rasa : Amḷa
Guna : Guru
Veerya : Ushṇa
Vipaaka : Amḷa
Doshakarma: Vaatashamana, Kapha Pitta vardhaka

Other ingredients: [7]

Lactose - 4.8g/100ml
Oligosaccharides - 0.005g/100ml
Calcium - 0.125
Phosphorous - 0.093
Sodium - 0.047
Potassium - 0.155
Chlorine - 0.103

Dadhi is good in malabsorption syndrome, remittent fevers and dysuria. increases bala and agni. It is indicated in

Table No. 1: Analytical parameters of cow's milk [6]

<i>Ingredients</i>	<i>Composition</i>
Water	86.2%
Total solids	12.5%
Ash content	0.74%
Acidity	0.15%
Sugar	4.5%
Fat	4.45%
Solids non fat	8.77%
Ph	6.5
Specific gravity	1.029
Casein	2.86%
Protein	3.77%
Lacto albumin	0.70%
Vitamin C	0.028 mg/ml

Table No. 2: Analytical parameters of cow's curd

<i>Parameters</i>	<i>Observation</i>
Loss on drying	87.78%
Ash content	0.75%
Acid soluble ash	Negligible
Total solids	12.22%
Fat content	4.0%
Carbohydrate	3.0%
Minerals	0.8%
pH	4
Specific gravity	1.03

• **Goghrita (Ghee) [9]**

Cow's ghee has higher digestibility than any other animal and vegetable fats and a better rate of absorption.

Rasa : Madhura
Guns : Snigdha

Veerya : S'eeta

Vipaaka : Madhura

Doshakarma : Vaata pitta samana

It is good for improving intelligence, improves vision, immunoenhancer and can be used in all age groups.

Table No. 3: Analytical parameters of ghee: [10]

<i>Parameters</i>	<i>Observation</i>
Loss on drying	0.15%
Ash content	0.10%
Acid insoluble ash	0.0009%
Fat content	99.83%
Saponification value	222.9
Iodine value	34.6
Specific gravity	0.935
Acid value	2.52
Refractive value	1.456
Unsaponifiable matter	0.31

• **Gomaya (Cow dung juice) [11]**

It is rich in organic matter and nitrogen. The gobar gas produced by its fermentation contains methane, hydrogen, carbon dioxide etc.

Rasa : Kashaaya, Tikta

Guna : Laghu, rooksha

Veerya : S'eeta

Vipaaka : Kat'u (Ushna)

Table No. 4: Analytical parameters of fresh cow dung [12]

<i>Parameters</i>	<i>Observation</i>
Loss on drying	83.19%
Ash content	2.37%
Acid insoluble ash	1.3%
Total solid	16.38%
Organic matter	80.0%
Nitrogen	1.23%
Potash	0.75%

• **Gomutra (Cow's urine) [13]**

Rasa : Kat'u, Lavana
 Guna : Laghu, Rooksha, Teekshna
 Vipaka : Kat'u
 Veerya : Ushna
 Dosha karma : Kapha vaata shamana,
 aggravates pitta
 Useful in many conditions of the skin, oedema
 and ascites.

It is best among the eight types of useful mootras mentioned in Ayurvedic texts. It is a good germicide and used in microbial diseases. It is easily digestible and contains ammonia in a concentrated form and used both internally and externally.

Table No. 5: Analytical parameters of cow's urine

<i>Parameters</i>	<i>Observation</i>
Loss on drying	98.88%
Ash content	0.37 %
Acid insoluble ash	Negligible
Total solids	1.12%
Organic matter	78.82%
Nitrogen	10.6%
Potash	7.2%
pH	8.2 %
Specific gravity	1.0482

Chemical contents [14]

Uric acid – used as a diuretic
 Hippuric acid – detoxification action
 Neutral sulphur – detoxification agent
 Urochrome – colouring matter
 Urobilin – pigment
 Creatine and creatinine, Amino acids, Urea,
 Ammonia, Inorganic salts

Gomutra – glimpses of research

It contains all the elements which compensate the deficiency of nutrients in our body, which are required for a healthy life. Thus it prevents or delay ageing process and hence called as an elixir. The mineral contained in it are copper, gold and salts which protect against diseases.

Gomootra exhibits the property of *Rasaayana* responsible for modulating various bodily functions, including immunity. It augments B- and T-lymphocyte blastogenesis; and IgG, IgA

and IgM antibody titers in mice. It also increases phagocytic activity of macrophages, and is thus helpful in the prevention and control of infections [15]. Antimicrobial and germicidal properties of *gomootra* are due to the presence of ure, creatinine, aurum hydroxide, carbolic acid, other phenols, calcium and manganese; its anticancer effect is due to uric acid's antioxidant property and allantoin; immunity is improved by swarnakshara; and wound healing is promoted by allantoin [16].

Cardiovascular health is maintained by kallikrein (vasodilator), the enzyme urokinase (fibrinolytic), nitrogen, uric acid, phosphates and hippuric acid (diuretics); ammonia maintains the integrity of blood corpuscles; nitrogen, sulphur, sodium and calcium components (blood purifiers) and iron and erythropoietin stimulating factor maintain haemoglobin levels. Renal health is maintained by nitrogen, which acts as a renal stimulant, and urinary components which act as diuretic agents. Its antiobesity effect is due to the

presence of copper ions; calcium promotes skeletal/bone health. Aurum hydroxide and copper act as antidotes for various poisons in the body. [17]

Table no. 6 Rasapanchaka of Panchagavya

<i>Drug</i>	<i>Rasa</i>	<i>Guna</i>	<i>Veerya</i>	<i>Vipaka</i>	<i>Doshakarma</i>
Goksheera	Madhura	Snigdha , guru	Seeta	Madhura	Vathapithasamana
Godadhi	Amla	Guru	Ushna	Amla	Vathasamana
Gogritha	Madhura	Snigdha	seeta	Madhura	Vathapittasamana
Gomaya	Kashaya,tikta	Laghu, rooksha	Seeta	Katu	Kaphapittasamana
Gomootra	Katu, lavana	Laghu, rooksha, tikshna	Ushna	Katu	Kaphavatha samana

By assessing the rasapanchaka of the five ingredients, it is very clear about the action on three doshas of Ayurveda. The drug is pacificatory to the three doshas in nature with the predominance of Kaphavatha samana. It is also agni deepaka and srotosodhaka [18]. Some of its ingredients have Anulomana property

which also has action on alleviating the vaata. The drug as a whole is Medhya, Ojasya and Rasaayana. Considering all these properties, the drug definitely acts on mind and its function. The srotosodhana action of the drug helps to act deeply on the mind destructing the aavarana of tamas and gives its clarity.

Table no. 7 Organoleptic characters of Pancagavya [19]

<i>Parameters</i>	<i>Colour</i>	<i>Odour</i>	<i>Touch</i>	<i>Taste</i>
Milk	Yellowish white	Pleasant	Viscous than water	Sweet and faint alkaline
Ghee	yellow	Pleasant	Oily	Slightly sweet
Curd	White	Pleasant	Faint oily	Sour & astringent
Urine	Straw yellow	Bad	Watery	Bitter
Dung	Brown	Bad	Sticky	-

Indications

The main indications of Pancagavya ghrita in various texts include:

- Apasmaara, Jvara, Unmaada, Kamala (A.H) [20]
- Deha sudhikara, Kapha vinaas'ana (Dh.N) [21]
- 4 types of Unmaada, Graha, Apasmaara (B. R)[22], (Y.R) [23]

- Kaantipradam, Pusht'idam, Putryam, Aayushkara, used in Graha and Bhoota (S.Y)[24]

As per the textual references, the gritha combination seems to mitigate both Vatha and Kapha, but is much more kaphasamana in nature. It is mainly indicated in psychiatric conditions like unmada, but also useful in somatic conditions like jwara, kamala etc. It is also useful in conditions causing emaciation.

Researches on Pancagavyaghrita

- An open clinical trial to study the efficacy of Pancagavyaghrita on cognitive domain in Down's syndrome. FibiMol PP et al, VPSV Ayurveda College, Kottakkal, 2012. [25] Down's syndrome accounts upto 1/13th of all the mentally handicapped individuals. Mental retardation is the overriding feature of Down's syndrome. In this study, which was an uncontrolled clinical trial, 10 subjects were included. Pancagavya gritha, the study drug was administered at the dose of 10 ml at 7 AM and & 7 PM for one month. The assessment was done at the end of 1st month and 2nd month. The assessment was done using Seguin Goggard Form Board test for Intelligent Quotient and Vineland's Social Maturity Scale for Social Quotient. After the management, the overall effect was 10.74% (P < 0.01) improvement in IQ after 1st month and 12.5% (<0.01) improvement after the end of 2nd month. In SQ, the overall improvement was 51.9% (<0.01) after 1st month and of 55.9% (<0.001) after the 2nd month. The teekshna, ushna, laghu characteristics seems to be clearing the srotus and hence clarifies the mind. The medhya drugs like gritha improves the intellectual functions.
- A study on the effect of Pancagavyagr'ta in the management of schizophrenia .Dr. Anumod A Kakkassery et al. V.P.S.V Ayurveda College, Kottakkal, 2009. [26] Schizophrenia seems to be the most common diagnosis in psychiatry OPD. Positive symptoms of Schizophrenia include delusion, hallucination, bizarre behavior, formal thought disorder. Negative symptoms of Schizophrenia include blunted affect, alogia, avolition, anhedonia and inattention. This study, which is an uncontrolled clinical trial, was conducted with 20 patients. 15 ml of Pancagavya gritha was administered at 6 AM and 6PM with anupana of warm water for 30 days. The change observed was assessed. Assessment of schizophrenia was done by the scale for assessing the positive symptoms of Schizophrenia (SAPS) for the positive symptoms and the scale for assessing the negative symptoms of Schizophrenia (SANS)

for the negative symptoms. It was found that the trial drug was significant in hallucinations (p<0.01), delusions (p<0.05), bizarre behavior (<0.01) of SAPS and avolition (p<0.05) and anhedonia (p<0.05) of SANS. Pancagavya gritha was not found significant in formal thought disorder of SAPS and blunted affect, alogia and inattention of SANS.

- Efficacy of Pancagavya gritha in Obsessive Compulsive Disorder – A pilot study. E M Shihabudheen, M Jithesh, 2012 [27] Obsessive compulsive Disorder is a multidimensional disorder with a prevalence of 0.6% in India. It is the fourth most common psychiatric diagnosis. In this study, Pancagavya gritha was used as the study drug. 20 outpatients attending our psychiatry OPD was selected as per the DSM IV diagnostic criteria. They were administered with 25 ml of Pancagavya gritha 25 ml orally at bedtime for 30 days. Assessment was done using the Yale Brown Obsessive Compulsive Scale (YBOC scale). The overall effect on obsession symptoms were 18.5% in the study patients. The overall effect on compulsion was 14% in the subjects. The drug seems to be effective in both the obsessive and compulsive part of OCD clinically.

DISCUSSION

Among the huge treasures of drugs mentioned in the Ayurvedic parlance, many of the drugs are still to be focussed. Pancagavya gritha is one among them. Accepting the fact that it is mentioned along with Apasmara chikitsa, It seems highly useful in various psychiatric conditions mentioned under the term unmada. As explained above pancagavya is a bio product which was used long back for spiritual and treatment purposes. If it is prepared in a gritha form, it becomes highly effective in various conditions affecting the functioning of brain, as it can cross the lipid blood brain barrier.

Based on the action on the doshas, the drug is Kapha vatha samana in nature with much more kaphaharatva than vathaaharatva. It is also cleansing the channels in the body which

brings clarity to the mind and its functions. Besides that, the gritha is the best drug for potentiating dheer, dhriti and smriti, which are the components of budhi, as per Ayurveda.[28]

Panchagavya gritha is widely used in psychiatric practise nowadays. One of the studies published in the journal of pharmacology reveals that Panchagavya gritha is effective against the ccl4 induced hepatotoxicity in rats [29]. It comes very close to the indication that Panchagavya gritha is effective in Kamala, as mentioned by our Acharyas. [30, 31]

From the above study it is clear that this particular drug is effective in improving the cognition of children, as it is even effective in those with autism where there is an irreversible damage for cognitive functions due to other causes. In conditions like schizophrenia also, Panchagavya gritha is effective in the positive symptoms and to an extent, the negative symptoms also. It will be definitely helpful to the Schizophrenics who are definitely missing their positive contributions to the society, as the disease manifests at a fruitful age of twenties. The other study shows the efficacy of the drug in conditions like OCD, which is also a debilitating multidimensional disorder. This drug which is a better option as far as epilepsy is considered is also very effective in conditions like post traumatic amnesia and also other organic brain disorders.

CONCLUSION

From this, we can conclude that Panchagavya gritha is effective in the management of many a Psychiatric conditions like schizophrenia, cognitive function in Down's syndrome, Obsessive Compulsive disorder. It is also very effective in organic brain dysfunctions like post stroke dementia etc. The list of indications of the drug Panchagavya gritha is yet to be completed by further research and hopefully so, it will become a powerful weapon for a psychiatrist in Ayurveda in the recent future.

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