

OVERLOOKED THERAPEUTIC POTENTIAL OF PANCHAGAVYA

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ABSTRACT

Indian Cow (*Bos taurus*) is the most sacred and economical animal of rural areas of India. Cow is the backbone of Indian rural economy. Cow is considered as mother in Hindu culture as many vedic scriptures also focused its significance in agriculture, economy, health and spirituality. Even in mythology Lord Krishna is associated with cow. Panchagavya is an organic combination of five cow products viz. cow milk (*Dugdha* in Sanskrit), curd (*Dadhi* in Sanskrit), cow urine (*Gaumutra* in Sanskrit), cow ghee (*Ghrut* in Sanskrit) and cow dung (*Gaumay* in Sanskrit). CSIR scientists were granted US patents (No. 6410059 and 6896907) for cow urine distillate (ark) for its antibiotic and anti-microbial properties. Many studies suggests that it is a great anti-inflammatory, anti-nociceptive, anti-oxidant, anti-epileptic, immuno-stimulant, bio-enhancer, growth promoter, anti-fungal and anti-cancer agent. Milk, Ghee and Curd are globally consumed for their high nutritional values. Cow urine and Cow dung are not consumed usually by peoples due to disgust. Several researchers form scientific laboratories, hospitals and Universities of India are working to find medicinal properties of Panchagavya. Panchagavya is a natural, economical and easily available potential therapeutic agent. Prophylaxis, cure and treatment of ailments by Panchagavya are also referred as Cowpathy.

Keywords: Panchagavya, Cowpathy, Ayurveda, *Bos taurus*, Pathogens

INTRODUCTION

Indian Cow (*Bos taurus*) is the most sacred and economical animal of rural areas of India. Cow is the backbone of Indian rural economy. Its various breeds are present in India. Some most famous breeds of Indian cows are Gir, Sahiwal, Red Sindhi, Hallikar, Amrit Mahal, Khillari, Kangayam, Bargur, Umblachery, Pulikulam, Alambadi, Tharparker, Haryana, Kakrej, Ongole, Krishna Velley, Deoni, Bachaur, Badri, Dangi, Kangayam, Kenkatha, Malvi, Mevati, Nagori, Rathi, Siri etc. It is used as domestic animals in agriculture since agricultural revolution begins or even before. Cow is considered as mother in Hindu culture as many vedic scriptures also focused its significance in agriculture, economy, health and spirituality. Even in mythology Lord Krishna is associated with cow. Panchagavya is an organic combination of five cow products viz. cow milk (*Dugdha* in Sanskrit), curd (*Dadhi* in Sanskrit), cow urine (*Gaumutra* in Sanskrit), cow ghee (*Ghrut* in Sanskrit) and cow dung (*Gaumay* in Sanskrit) and its standard ration of mixture is 3:2:1:1:0.5 respectively. According to Rashtriya Kamdhenu Aayog, any person can take Panchagavya orally like 50-60 ml mixed in glass of water or fruit juice. Maharshi Dhanvantari first describes the Panchagavya. It can be used internally as well as externally. “Pancha” means five and “Gavya” means ingredients. In ayurvedic literatures such as Charak-Samhita and Sushrut-Samhita, its therapeutic potential is mentioned. It is also considered as an antidote to poison according to Sushrut-Samhita. Prophylaxis, cure and treatment of ailments by Panchagavya are also referred as Cowpathy. Recently Government of India has taken many initiatives such as Project Kamdhenu, Rashtriya Gokul Mission and SVAROP (Scientific Validation and Research on Panchagavya) to promote Cowpathy. CSIR scientists were granted US patents (No. 6410059 and 6896907) for cow urine distillate (ark) for its antibiotic and anti- microbial properties. Many studies suggests that it is a great anti-inflammatory, anti-nociceptive, anti-oxidant, anti-epileptic, immuno-stimulant, bio-enhancer, growth promoter, anti-fungal and anti-cancer agent. Milk, ghee and curd are globally consumed for their high nutritional values. Cow urine and cow dung are not consumed usually by peoples due to disgust. Various medical formulations of Panchagavya like Amritasara, Ksharavati, Ghanavati, Netrasara, Adi Panchagavya ghrut are commercially available as ayurvedic medicines by allopathic shops and many

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private companies such as Patanjali. Panchagavya is a natural, economical and easily available potential therapeutic agent. Several researchers from scientific laboratories, hospitals and Universities of India are working on medicinal properties of Panchagavya (Dhama *et al*, 2005; Joshi and Adhikari, 2019).

DISCUSSION

According to Charak-Samhita, three fundamental remedial systems were developed *viz.* Vrikshayurveda for plants, Mrigayurveda for animals and Ayurveda for humans. Panchagavya is used in all remedial systems cited above. Cowpathy is a remedial system somewhat similar to allopathy, homeopathy and naturopathy. Among the Panchagavya mixture, cow urine is considered as an incredible aqueous phase and panacea of all diseases. Research conducted at Cow Urine Treatment and Research Centre, Indore gives evidence that it is capable of curing cancer, heart attack, diabetes, arthritis, blood pressure ailment, asthma, thyroid, eczema, psoriasis, prostate, AIDS, migraine, piles, ulcer, acidity, constipation, gynecological ailments, ear and nose ailments and many more diseases. Its external use as ointments, lotions and bath is also used as antiseptic and disinfectant in many skin problems. The biochemical composition of cow urine is 95% water, 2.5% urea and remaining 2.5% is a balanced mixture of Nitrogen, Sulphur, Sodium, Manganese, Iron, Silicon, Chlorine, Magnesium, Calcium, Phosphorus, creatinine, lactose, enzymes, hormones, vitamins *etc.* The ingredients found in Ganga Jal and Gaumutra are very similar. Cow urine contains all minerals presents in human body so it is used to maintain electrolyte balance in the body. Its agricultural and sericultural uses are also prominent and promising. Panchagavya is reported to be useful as nasal drops in rhinitis, sinusitis and migraine (Sivakumar, 2014; Raut and Vaidya, 2018).

Over production and expiry of byproducts of cow might initiate the concept of Panchagavya. It was useful method of recycling waste byproducts of cow. During agricultural revolution, byproducts of domestic cattle were utilized as manure. Early philosophers might think that if it is an elixir for plant growth and health, it must be boon for humans and animals too. So the idea of Panchagavya became popular as it transmits from Guru-Shishya Parampara. Charak-Samhita mentions the use of Panchagavya in jaundice, fever and memory decline. A study suggests its use in jaundice (Sivakumar, 2014; Achilya *et al*, 2013). Panchagavya with *Aloe vera* extracts shows anti-noceceptive effects (Sivakumar, 2014; Kumar *et al*, 2013). Panchagavya is also used as pesticides and fertilizers in agriculture. It is also used as bioenhancer as it fix Nitrogen level in the soil. Cow urine is used in management of European foul brood (a bacterial disease of honeybee) (Raut and Vaidya, 2018). People of India, Nepal, Nigeria and Myanmar use cow urine as medicine (Mohanti *et al*, 2014). Many people in India rub their body with cow dung and cow urine and later washed off with cow milk or buttermilk to boost their stamina and immunity. However some health risks are also associated with consumption of Panchagavya like spread of zoonotic diseases from cow to humans. Human might infected from Q fever, ringworm, leptospirosis, chlamydia, salmonellosis, listeriosis, campylobacteriosis, yersiniosis *etc.* (Joshi and Adhikari, 2019).

Another study using tail suspension model suggests anti-stress activity of composition of Panchagavya and *Aloe barbadensis* Mill. Further a study confirms hepato-protective activity of Panchagavya ghrita against CCL4 induced hepato-toxicity in rats (Achilya *et al*, 2013). Some researchers conducted experiment to conclude that rather extracts of cow dung possess any antimicrobial property against human pathogens and result showed that cow dung has antimicrobial property against Gram negative bacteria such as *Klebsiella pneumonia* (Rajeswari *et al*, 2016). According to Rashtriya Kamdhenu Aayog which comes under the aegis of Ministry of Animal Husbandry and Fisheries suggests that Panchagavya products are useful in treating diseases like psoriasis, skin disorders, eczema, leprosy, arthritis, bladder diseases, abdominal diseases, respiratory diseases, liver diseases *etc.* Some scientists and medical professional claims that cow urine therapy (CUT) and cow dung therapy (CDT) are traditional practices from India, which does not have any strong scientific proof. However in Ayurveda, it is of great importance as it balances the Tridosha *viz.* Vata, Pitta and Kapha (Ghosh and Biswas, 2018; Pathak and Kumar, 2003). Panchagavya has anti-microbial, anti-fungal and germicidal properties due to presence of

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urea, creatinine, phenols, carbolic acid, amino acids, urinary peptides and acidic pH. Some peoples also argue that when Government is giving free medicines to the people and all antibiotics, antifungal and antiseptic medicines are easily available at free or at cheapest cost, then there is no sense of using raw Panchagavya without understanding their side effects.

Panchagavya is effective in controlling phyto-pathogenic fungi includes *Aspergillus* spp., *Rhizopus* spp., *Mucors* spp., *Penicillin* spp., *Alternaria* spp. and *Macrophomina* spp. Shata-Dhauta-Ghrita is an Ayurvedic preparation which is prepared by washing cow ghee one hundred times with water. It is prescribed for treatment of wounds, burns, chicken pox, herpes, leprosy, scars and many other skin diseases (Deshpande *et al*, 2009). Sushrut-Samhita mentioned the use of Panchagavya in cure of fever, epilepsy, mania and hepatitis. Some researchers also claims that schizophrenic symptoms such as delusions and hallucinations are significantly diminishes due to use of Panchagavya. Panchagavya also augments the phagocytic properties of macrophages and facilitate the synthesis of interleukin-1 and interleukin-2. It also enhances the response of IgA, IgM and IgG antibody and promotes blastogenesis of B and T lymphocytes. Some researchers found it significant in improvement in people suffering with Down syndrome (Gajbhiye *et al*, 2014; Jitesh, 2013; Singla and Garg, 2013; Kumar, 2013). Panchagavya can also be used as alternate source of energy in biogas plants. Many FMCG products such as tooth paste, tea, cosmetics, hair oil, massage oil, soap, shampoo *etc.* can be made from Panchagavya and provide a good alternate of chemical products used currently. Panchagavya therapy can also be used as an alternate in cases of drug resistance and where side effects of drugs are prominent (Dhama *et al*, 2013; Dhama and Rathore, 2005; Randhawa and Kullar, 2011). Another study suggests that it is beneficial in cognitive and mental disorders. A study using tail immersion model confirms that different composition of Panchagavya and *Aloe barbedansis* Mill show anti-nociceptive activity synergistically (Wate *et al*, 2012). A study proves that cow urine enhance the wound healing property in Wister albino rats (Jagadeesh *et al*, 2011). Another study conclude that Panchagavya ghrita is promising in management of many psychiatric conditions like OCD, schizophrenia, stroke, dementia, autism *etc.* (Jitesh, 2013). A research also validates the composition of Panchagavya and Kunapajala (decomposed product of fish or animals in liquid form) as plant growth promoters (Sulagna *et al*, 2014). Another research also proves that cow urine extract prevents complication of hemorrhoids (Talokar *et al*, 2013). Cowpathy has been considered as a prophylactic and therapeutic approach for livestock and poultry health along with human health (Khan *et al*, 2015). Cowpathy is useful in curing many human ailments and promote immunity and resistance to cop many infections (Hazarika *et al*, 2018).

A study shows *in-vitro* anti-oxidant property of Panchagavya (Athavale *et al*, 2012). Another study proves that cow urine is and potential anti-fungal and anti-microbial agent (Deshmukh *et al*, 2012; Kumar, 2013). Further a study proves anti-diabetic and anti-oxidant potential of cow urine (Gururaja *et al*, 2011; Sachdev *et al*, 2012). A research gives evidence of anti-epileptic effect of Panchagavya (Pawar *et al*, 2016; Gosavi and Premendran, 2012). Cow urine has been proved for its excellent lipase activity and anti microbial properties (Kumar, 2013; Sahu *et al*, 2016; Teo and Teoh, 2011; Randhawa and Sharma, 2015). Another research proves that ghee eye drops are effective cure for computer vision syndrome (Mulik and Bhusari, 2013, Upadhyay *et al*, 2010). Panchagavya improves the growth and enhance the productivity of crops (Deepika *et al*, 2016; Sahu *et al*, 2017; Tharmaraj *et al*, 2011). A survey also shows potential of Cowpathy on cancer patients in Mandsaur district, India (Jain *et al*, 2010). Panchagavya is more effective as anti-helminthic and against MDR pathogens when used with Neem (*Azadirachta indica*) (Rajapandiyan *et al*, 2011) and *Bauhinia variegata* (Kumar *et al*, 2014). Overall we can say that even many experiments has been done although more concrete scientific evidence is required to validate Panchagavya for estimating its therapeutic potential.

CONCLUSION

No doubt that the Panchagavya is a promising thing and a boon for rural people of India. But we must understand that use of cow dung and cow urine without purification may be dangerous. Purification of

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cow dung and cow urine needs laboratories, which is not feasible in rural areas. Panchagavya is panacea for agricultural purpose because it enhances mineral status of soil, stimulate plant growth and increase resistance of plants against diseases. It is very useful in organic farming as bio-enhancers, bio-fertilizers, bio-pesticides and vermin-compost. If we use Cowpathy in treatment of incurable fatal diseases, where no other option is available then it must be definitely adopted. It might be great placebo or hope for people suffering from incurable fatal diseases. Panchagavya and their use require more scientific validation. Government must encourage research and development on Panchagavya. According to my opinion, we must use Pancharamrita instead of Panchagavya. Pancharamrita has same benefits as of Panchagavya without any harmful side effects. Pancharamrita is considered as food of God in ancient scriptures. Pancharamrita is an organic mixture of cow milk, curd, ghee, jaggery and honey. It must be adopted and accepted by peoples around the world without disgust.

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