

ROLE OF BILWADI AGADA IN PREVENTION OF COVID - 19Varun Rajpuria¹, Anitta James²

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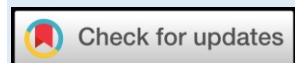
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**ABSTRACT**

Agada Tantra is a specialized branch of *Ayurveda* which mainly deals with *Visha* (Poison) and its management mainly through special formulations called *Agada Yogas* which counteract the deleterious actions of poison over the body. There are numerous such formulations which are unique because of their potent ingredients and fast action. *Bilwadi Agada* is one among such *Yogas*. In December 2019, a series of acute atypical respiratory disease occurred in Wuhan and then rapidly spread to other areas. It was soon discovered that a novel Corona Virus was responsible, and this was named as the Severe Acute Respiratory Syndrome Corona Virus-2 (2019) due to its high homology to SARS-CoV-2 which caused Acute Respiratory Distress Syndrome and high mortality during 2002–2003 in China. According to *Ayurveda*, this novel Corona is a *Jangama Visha* as it is of zoonotic origin. It affects the upper respiratory tract so is the movement of *Jangama Visha* which moves upward and affects those areas. It is also mentioned in *Ayurvedic* treatise that the *Jangaman Visha* should be treated with *Sthavara dravyas*. *Bilwadi gutika* is an *Ayurvedic* medicine prepared from thirteen medicinal plants triturated in goat's urine. When we compare the primary symptoms of COVID-19 and the indications of *Bilwadi gutika*, we can see so many similarities. The main objective of this article is to discuss the therapeutic and pharmacological properties of *Bilwadi Agada* and thereby understanding its role in prevention and control of COVID-19 pandemic.

Keywords: *Agada Tantra*, *Bilwadi Agada/Yoga/Gutika*, COVID-19, *Visha*, *Jangama Visha*, Prevention.

INTRODUCTION

Agada Tantra is one among the eight branches of *Ayurveda* which deals with the type, classification, symptoms, management of various animal (*Janghama*), plant (*Sthavara*), artificial and latent poisons¹. It is a specialized branch of *Ayurveda* which mainly deals with Poison and its management mainly through *Agada Yogas* (formulations), the special Ayurvedic formulations which counteract the deleterious actions of *Visha* or poison over the senses and organs. There are numerous *Agada Yogas* which are unique because of their potent ingredients and its fast action. *Bilwadi Agada* or *Bilwadi Yoga* is one of the most important *Agada* formulations mentioned in classics and is the first drug of choice in acute toxicopathological conditions. Reference of this formulation can be obtained from *Ashtanga Hridaya*², *Saharsrayogam*, *Visha Jyotsnika* and *Kriya Kaumudi*. *Vati kalpana* is an *upakalpana* of *Kalka Kalpana* which is palatable and has greater shelf life and so is preferred abundantly in clinical practice. “*Bilwadi Agada/ Yoga*” is named as “*Bilwadi Gutika*” in Ayurvedic Formulary of India and this name is used commonly nowadays. In December 2019, a series of acute atypical respiratory disease occurred in Wuhan, China and this rapidly spread from Wuhan to other areas. It was soon discovered that a novel Corona Virus was responsible and this was named as the Severe Acute Respiratory Syndrome Corona Virus-2, 2019 (SARS-CoV-2, 2019) due to its high homology (~80%) to Severe Acute Respiratory Syndrome Corona Virus-2 (SARS-CoV-2) which caused Acute Respiratory Distress Syndrome (ARDS) and high mortality during 2002–2003 in China³. Before the outbreak of COVID-19, the diseases caused by Corona Virus was SARS-CoV-2 which occurred in 2002-2003 in China and MERS (Middle East Respiratory Syndrome) which occurred in 2012 in Saudi Arabia. The World Health Organization has named it as COVID-19 disease and declared it as a Pandemic. WHO says that world has to learn to live with the Corona virus. The only steps that can be done is to identify those who have been infected and keeping them in isolation so as to prevent its

transmission and to flatten the outbreak curve and to protect the health of the uninfected by special formulations and immune boosters. This article is based on Ayurvedic textual review and the clinical experiences to tap into age-old wisdom of Ayurveda to boost up the immunity during COVID-19 outbreak. Descriptions related to *Bilwadi Agada* were collected from Sarvanga Sundara commentary of *Ashtanga Hridaya* by Acharya Arunadatta. Information related to COVID-19 were collected from online webinars, online journals and through internet. Relevant textual literature and scientific publications were referred.

METHODOLOGY

A General Introduction to Poison/*Visha* Types of Poison / विष प्रकार

sthavaram jangamasya yacch kritrimam chaapi yadwisham | sadyo vyapaad yettassu gveyam dash gunaanvitam (su.k.2/24) Acharya Susruta says that there are three different types of poison namely *Sthavara visha*, *Jangama visha* and *Kritrima visha*. Under *Sthavara visha* comes all poisons that are of plant origin⁴. Under *Jangama visha* comes all poisons that are of animal origin and *Kritrima visha* are all the artificial poisons that we see around. COVID -19 can be placed in the the second group i.e., *Jangama Visha* as per Ayurveda as it is a zoonotic origin.

Movement of *Visha* in the Body / विष गति

Jangamasyad Adho Bhagam Urdhwa bhagam tu moolajam (CH.CHI.23/17)

Acharya Caraka says that animal poisons flow upwards, and plant poisons flows downwards⁵. When considering, it primarily affects the respiratory system which is the upper body, which shows that animal poisons flows upwards and affects mainly the organs in the upper part of the body.

Symptoms Caused by Animal Poisoning / जङ्गमं विष सामान्य लक्षण

Nidra tandra klamam daham sapakam lom harshanam | Shofam ch atisaaram ch janyejagam visham (ch.chi.23/15)

Animal poisoning produces sleep, drowsiness, fatigue, burning sensation, inflammation, horripulation, oedema and diarrhoea⁶. When we compare these

symptoms with the mild symptoms of COVID -19, we see that there are many similarities like of acute upper respiratory tract infection (fever, fatigue, sore throat) and of digestive symptoms (nausea, vomiting, diarrhoea).

Use of antidote / प्रतिविषा प्रयोग

Vishapanam dashtanam Vishpeete dasanan chante (ch.chi.23/50)

At the end, the patient should be given a poison containing poison to drink if he is afflicted with the poison caused by bite⁷. If he is afflicted by the poison taken orally, then he should be made to be bitten by a poisonous animal. Thus, On the basis of the concepts described in the Chikitsa Sthana of Caraka Samhita, COVID-19 can be considered as Jangham visha and so Sthavara visha can be used as an Antidote in this condition. Bilwadi Agada is the best drug of choice for this. It can help the patient to overcome the acute symptoms of COVID-19 and also helps to prevent this viral infection as it acts in all acute toxico - pathological conditions.

COVID - 19

The outbreak of COVID-19 was considered to have originally started via a zoonotic transmission

associated with the seafood market in Wuhan, China. Later it was recognized that human to human transmission played a major role in the subsequent outbreak. The disease caused by this virus was called Coronavirus disease-19 (COVID-19) and a pandemic was declared by the World Health Organization (WHO)⁸. COVID-19 has been impacting a large number of people worldwide, being reported in approximately 200 countries and territories. SARS-CoV-2 virus primarily affects the respiratory system, although other organ systems are also involved. Lower respiratory tract infection related symptoms including fever, dry cough and dyspnoea were reported in the initial case series from Wuhan. In addition, headache, dizziness, generalized weakness, vomiting and diarrhea were observed. It is now widely recognized that respiratory symptoms of COVID-19 are extremely heterogeneous, ranging from minimal symptoms to significant hypoxia with ARDS. In the report from Wuhan mentioned above, the time between the onset of symptoms and the development of ARDS was as short as 9 days, suggesting that the respiratory symptoms could progress rapidly.

Table 1: Classification Of Covid-19 Patients

Asymptomatic	COVID nucleic acid test positive. Without any clinical symptoms and signs and the chest imaging is normal
Mild	Symptoms of acute upper respiratory tract infection (fever, fatigue, myalgia, cough, sore throat, runny nose, sneezing) or digestive symptoms (nausea, vomiting, abdominal pain, diarrhoea)
Moderate	Pneumonia (frequent fever, cough) with no obvious hypoxemia, chest CT with lesions.
Severe	Pneumonia with hypoxemia (SpO ₂ < 92%)
Critical	Acute respiratory distress syndrome (ARDS), may have shock, encephalopathy, myocardial injury, heart failure, coagulation dysfunction and acute kidney injury.

Drug Review: Classical reference of बिल्वदि गुलिका is mentioned as “Bilwadi Agada” in Ashtanga Hridaya Uttara Tantra⁹.

बिल्वदि गुलिका/ अगद

Bilvasya mulam sursaya pushpamfalam karanjasya natam suraha fal trikam vyoshanishadwayam ch bastasya mutren susuksham pishtam bhujang lutondur vrishchikedy visuchikarjan gara jwaraschah artaan naraan bhutvidharshitawa swastikrotya anjanapaannasya (A.H.U. 36/84-85)

Table 2: Ingredients of *Bilwadi Agada/Vati/Gulika*

No	Name of the drug	Botanical name	Part used	Quantity
1.	<i>Bilwa</i>	<i>Aegle marmelos</i>	<i>Moola</i> (Root)	1 part
2.	<i>Surasa</i>	<i>Ocimum sanctum</i>	<i>Pushpam</i> (Flower)	1 part
3.	<i>Karanja</i>	<i>Pongamia pinnata</i>	<i>Phala</i> (Fruit)	1 part
4.	<i>Natam</i>	<i>Valeriana wallichii</i>	<i>Moola</i> (Root)	1 part
5.	<i>Surahwam</i>	<i>Cedrus deodara</i>	<i>Kanda sara</i>	1 part
6.	<i>Haritaki</i>	<i>Terminalia chebula</i>	<i>Phala</i> (Fruit)	1 part
7.	<i>Vibheetaki</i>	<i>Terminalia bel-lerica</i>	<i>Phala</i> (Fruit)	1 part
8.	<i>Amalaki</i>	<i>Embica offici-nalis</i>	<i>Phala</i> (Fruit)	1 part
9.	<i>Shunti</i>	<i>Zingiber offici-nale</i>	<i>Kanda</i> (Rhizome)	1 part
10.	<i>Maricha</i>	<i>Pipper nigrum</i>	<i>Phala</i> (Fruit)	1 part
11.	<i>Pippali</i>	<i>Piper longum</i>	<i>Phala</i> (Fruit)	1 part
12.	<i>Haridra</i>	<i>Curcuma longum</i>	<i>Kanda</i> (Rhizome)	1 part
13.	<i>Daruharidra</i>	<i>Berberis aristata</i>	<i>Kanda</i> (Rhizome)	1 part
14.	Bastasya mutra (Goat's urine)			Q.S.

Method of Preparation

The fine powder of above ingredient is triturated with goat urine and tablets are prepared.

Siddha lakshanas - (Confirmatory signs)

Susukshma Pishtam - “Very fine in consistency” is mentioned as *sidda lakshana*. Regarding duration of *bhavana* (trituration) it is opined that 6 *yaama* (1 *yaama* is approximately 3hours). In general practice 3-4 hours/day for 6 months is done.

Indications: Bite from snakes, spiders, rodents, scorpion, all insects and microorganisms. Cholera, Indigestion & Dyspepsia., Artificial Poisoning., Fever., Infectious conditions.

We all know that the outbreak of SARS-CoV-2 was considered to have originally started via a zoonotic transmission associated with the seafood market in

Wuhan. The earliest symptoms of the disease are fever, fatigue, myalgia, cough, sore throat, runny nose, sneezing or digestive disorders like nausea, vomiting, abdominal pain and diarrhea. When we compare these symptoms with the indications of Bilwadi Agada, we can see a lot of similarities. Thus, we can say that this *Agada* which mainly acts in acute toxico-pathological conditions can work wonders in COVID-19 too as it helps in controlling the disease symptoms to go to further stages and also can be given to healthy people too as a preventive measure.

Application: Internal - 2000 mg/day in divided doses. Indications for External Application - *Sarpa, Loota, Unduru, Vrischika*

Doses: 1-2 tablet once or twice a day before food.

Table 3: *Rasapanchaka* of *Bilwadi Gutika*

Sl.No	Name of the drug	Rasa (taste)	Guna (property)	Virya (Potency)	Vipaaka	Karma (mode of action)
1.	<i>Bilwa</i>	<i>Kashaya, tikta</i>	<i>Laghu, ruksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kapha-vata shamaka, mru durechaka</i>
2.	<i>Surasa</i>	<i>Katu, tikta</i>	<i>Laghu, ruksha</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kapha-vata shamaka, tvak doshahara, rakta shodhaka Vishaghna</i>
3.	<i>Karanja</i>	<i>Tikta, Kashaya</i>	<i>Laghu, tik-shna</i>	<i>Ushna</i>	<i>Katu</i>	<i>Kapha-vatashamaka, kandugna, jantugna, kushtagna</i>

4.	Natam	Tikta, Kashaya	katu, Laghu, snigdha	Ushna	Katu	Kapha-vata shamaka, Vishagna
5.	Surahwam	Tikta	Laghu, snigdha	Ushna	Katu	Kapha-vata shamaka, kushtagh-na, jwaraghna
6.	Haritaki	Kashaya pradhana lavana varjitha pancharasa	Laghu, ruksha	Ushna	Madhura	Tridosahara, kushtaghna, jwara-ghna, rasayana
7.	Vibhitaki	Kashaya	Ruksha, laghu	Ushna	Madhura	Tridosahara, krimighna, jwaragna, raktasthambhana
8.	Amalaki	Amla pra-dhana lavana varjith pancharasa	Guru, ruksha,	Sheeta	Madhura	Tridosahara, sthambhana, daha-prashamana, ra-sayana
9.	Shunti	Katu	Laghu, snigdha	Ushna	Madhura	Vata-kaphahara, deepana, bhedana
10.	Maricha	Katu	Laghu, tikshna	Ushna	Katu	Vata-kaphahara, lekhana, deepana, pachana, krimighna
11.	Pippali	Katu	Laghu, snigdha, tikshna	anushnasheeta	Madhura	Kapha-vata shamaka, kushtagh-na, jwaraghna, balya rasayana
12.	Haridra	Tikta, katu	Ruksha, laghu	Ushna	Katu	Kapha-vata shamaka, kushtagh-na, jwaraghna
13.	Daruharidra	Tikta, Kashaya	Laghu, ruksha	Ushna	Katu	Kapha-pitta shamaka, katu-paushtika

By the above-mentioned *Rasa, Guna Virya and Vipaka*, some *Vaidyas* opine that the action of this formulation is because of uniqueness of combination possessed special action. Majority of the drugs are *tikta* (bitter), *katu* (pungent) *rasa pradhana* which acts as *Kapha Vata hara* (pacifies *Kapha & Vata*). All drugs are *ushna veerya* (hot potency), majority are *katu vipaka* hence can act as quickly as *Visha*

DISCUSSION

As per Ayurveda, COVID-19 is a *Jangama Visha* as it is of zoonotic origin. *Jangama Visha* has an upward movement in the body so is COVID-19 which affects mainly the upper respiratory system. COVID-19 primarily affects the respiratory system, which is the upper body, which substantiates the Ayurvedic principle which says that animal poisons flow upwards and affects mainly the organs in the upper part of the body. *Jangama Visha* produces sleep, drowsiness, fatigue, burning sensation, inflammation, horripilation, oedema and diarrhoea. When we compare these symptoms with the mild symptoms of COVID -19, we see that there are many similarities

between them like of acute upper respiratory tract infection (fever, fatigue, sore throat) and of digestive symptoms (nausea, vomiting, diarrhoea). On the basis of the concepts described in Caraka Samhita, COVID-19 can be considered as *Janghama Visha* and so *Sthavara Visha* can be used as an Antidote. *Bilwadi Agada* which is prepared from medicinal plants of antibacterial and anti-microbial qualities is one of the best drugs of choice.

The earliest symptoms of COVID-19 are fever, fatigue, myalgia, cough, sore throat, runny nose, sneezing or digestive disorders like nausea, vomiting, abdominal pain and diarrhoea. When we compare these symptoms with the indications of *Bilwadi Agada*, we can see a lot of similarities. Thus, we can say that this *Agada* which mainly acts in acute toxicopathological conditions can work wonders in COVID-19 too as it helps in controlling the disease symptoms and also can be given to healthy people too as a preventive measure. When we summarize the *Rasa, Guna Virya and Vipaka*, we find that majority of the drugs are *tikta* (bitter), *katu* (pungent) *rasa pradhana* which acts as *Kaphahara* (pacifies *Kapha*). As we

already know, COVID-19 is a disease affecting mainly the Upper respiratory tract and as *Bilwadi Agada* too pacifies mainly *Kapha Dosha* situated above the heart region. All drugs are *Ushna veerya* (hot potency), majority are *Katu vipaka* hence can act as quickly as *Visha* (Poison). In COVID-19, when we study the time between the onset of symptoms and the development of ARDS was as short as 9 days which suggests that the respiratory symptoms could progress very rapidly. *Bilwadi Agada* too can act very quickly as *Visha* (Poison). Thus, as indications of *Bilwadi Gutika* has high similarities with the symptoms of COVID-19 and as it is a *Kaphahra Yoga* and due to its quick action, intake of *Bilwadi Gutika* in the starting stages of COVID-19 can do wonders to the patient. Even healthy people too should implement a habit of intaking this *Agada* as a preventive measure so as to protect oneself from the novel Corona virus.

CONCLUSION

Bilwadi Gulika is an effective Ayurvedic medicine providing healing effects from problems arising due to imbalance of mainly *Kapha Dosha*. COVID-19 can be considered as a *Jangama Visha* and so its treatment should be by medicines prepared from *Sthavara dravyas*. When we study the symptoms and features of COVID-19 disease, we find that it is mainly a *Kapha* predominant disease as it affects the Upper Respiratory tract mainly and then the gastric symptoms. *Bilwadi Agada or Gutika* is an Ayurvedic remedy that has ability to counter the toxic effects that arise due to toxins of all kinds and also in conditions like fever, indigestion, fatigue, diarrhoea, nausea, vomiting etc. All these indications show similarities with the symptoms of earlier stages of COVID-19. It can be considered as a drug of choice in controlling the further stages of this disease and also as a preventive medicine. Thus, *Bilwadi Agada* can do wonders in prevention and treatment of COVID-19 pandemic and can be administered to both healthy and infected individuals. We are being the representatives of Ayurvedic fraternity, it is the need of the hour to come out with promising results either preventive or

prophylactic treatment modalities with our age old Ayurvedic remedies to fight against this Pandemic.

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