


Review Article
A CRITICAL REVIEW ON NAYOPAYAM KWATHA- A UNIQUE AYURVEDIC FORMULATION FOR RESPIRATORY DISEASES
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ABSTRACT

Ayurvedic dosage forms are mostly poly herbal, which is more effective compared to the single herb therapies. *Nayopayam kwatha* (NK) is a widely prescribed polyherbal formulation for postnatal care, heart diseases and respiratory ailments. It is quoted in Ayurvedic textbooks viz; *Vaidya Manorama* and *Arogyaraksha Kalpadruma*. The formulation consists of *Bala*, *Jeeraka* and *Nagara*. The source plants are *Bala* (*Sida cordifolia* Linn as per AFI and *Sida retusa* Linn in Kerala), *Jeeraka* (*Cuminum cyminum* Linn) and *Nagara* (*Zingiber officinale* Rosc). A detailed literature review is conducted on NK to explore its probable mode of action in respiratory ailments. Pharmacological actions of each ingredients and proven pharmacological activities are included in this study. Ethno botanical variability is noticed in NK manufactured by different pharmaceutical agencies. Apart from this, it is having *Ushna veerya*, predominantly *Katu rasa* and *Vatakaphaharatwa* which in turn act against the respiratory ailments. Considering these all aspects, NK is a potent formulation used for respiratory infections and inflammations.

KEYWORDS: *Nayopayam kwatha*, *Bala*, *Jeeraka*, *Nagara*.

INTRODUCTION

Nayopayam Kwatha (NK) is an Ayurvedic formulation; widely prescribed by Kerala Ayurveda physicians for postnatal care, heart diseases and respiratory ailments. It was first described in Ayurvedic textbook *Vaidya Manorama*^[1] in the *Kasa Chikitsa* chapter (treatment of cough) and also in *Arogyaraksha Kalpadruma*^[2] in *Vata Roga Chikitsa* chapter (diseases of *Vata* origin). Modification of this formulation like *NK Kashaya* tablet, *Nayopayam Lehyam* and *Brhat Nayopayam Kashayam* are now available in the market.

The proportion and indication of *Nayopayam kwatha*

The formulation *Nayopayam Kwatha* consists of *Bala*, *Jeeraka* and *Nagara* in ratio 3:2:1 as per *Vaidya Manorama* and 10:1:1 as per *Arogyaraksha Kalpadruma*. NK prepared in these two different proportions are available in the pharmacy.

The reference *Sloka* (verse) is sited below;

*"Nayopaayayana mithe balajeerakanagarei
Kwatha peetha pramadhnaty sameerana balam
balath"* (*Vaidya Manorama*)

*"Balayaam dasabhir bhage dwabhyaam Jeeraka
vishwayoo*

Siddhakkwatho nayopaya swasa hidma haram param"
(*Arogyaraksha Kalpadruma*)

NK is indicated as *Vatasamana* (pacification of *Vata*) as per *Vaidya Manorama*, and for *Swasa* (breathlessness) and *Hikka* (hiccough) as per *Arogyaraksha Kalpadruma*.

Source plants in the formulation

NK is a simple preparation in which there are only three components in it. The source plants with their botanical identity and part used in NK is given in table 1.

Table 1: The Source Plants in *Nayopayam Kwatha*

S.No	Ingredients	Source plants	Part used
1	<i>Bala</i>	<i>Sida cordifolia</i> Linn (as per AFI) <i>Sida retusa</i> Linn (in Kerala)	Root
2	<i>Jeeraka</i>	<i>Cuminum cyminum</i> Linn	Fruit
3	<i>Nagara</i>	<i>Zingiber officinale</i> Roscoe	Dried rhizome

MATERIALS AND METHODS

The study was done by in depth literature survey through various Ayurveda classical textbooks and online databases.

RESULTS AND DISCUSSION**Pharmacological action of the ingredients of NK as per Ayurveda**

The mode of action of a drug depends on its *Rasa Panchaka* which is a unique concept in Ayurveda. *Rasa Panchaka* of each ingredient in NK is enlisted in table 2.

Table 2: Pharmacological action of the ingredients of NK

Name of the drug	<i>Bala</i> ^[3,4]	<i>Jeeraka</i> ^[5,6]	<i>Nagara</i> ^[7,8,9]
Rasa	<i>Madura, Tikta</i>	<i>Katu</i>	<i>Katu</i>
Guna	<i>Snighda</i>	<i>Laghu, Ruksha</i>	<i>Laghu, Snighda</i>
Virya	<i>Seeta</i>	<i>Ushna</i>	<i>Ushna</i>
Vipaka	<i>Madura</i>	<i>Katu</i>	<i>Madura</i>
Karma	<i>Tridoshahara, Vrishya, Balya, Grahi, Ojovardhana</i>	<i>Vatakaphahara, Deepana, Sangrahi, Medhya, Chakshusya</i>	<i>Vatakapha Hara, Deepana, Pachana, Sangrahi, Hridya</i>
Vyadhi karma	<i>Rakthapitha, Prameha, Pradara, Vatavikara, Vrana</i>	<i>Agnimandya, Ajirna, Adhmana, Gulma, Hridroga, Garbhasaya Vikara</i>	<i>Ajirna, Agnimandya, Swasa, Arsha, Hridroga, Kasa</i>

Even though NK is a widely prescribed medicine, data available about its research works are scarce. A clinical study on *Tamaka Swasa* (bronchial asthma) by Syam. et.al 2010^[10] about the role of *Nithya Virechana* with *Eranda Thaila* and *Shamana* (pacification of the disease) using daily intake of *Nayopayam kwatha* adds to its effectiveness in the disease.

Pharmacological Researches of the Ingredients of NK:

The tools to assess pharmacological activities of a plant is by in-vitro studies, in-vivo studies, clinical trials etc. The active phytoconstituents are found to possess these activities. The pharmacological activities of ingredients of NK are shown in Table. 3.

Table 3: Pharmacological researches of the ingredients of NK

Botanical name	Pharmacological activity
<i>Sida cordifolia</i> Linn	Having antioxidant ^[11] , analgesic ^[12] , anti-inflammatory ^[13] , antibacterial ^[14] and hepatoprotective ^[15] activities
<i>Sida retusa</i> Linn	Having antioxidant ^[16] , analgesic ^[17] , anti-inflammatory ^[17] and hepatoprotective ^[18] activities
<i>Cuminum cyminum</i> Linn	Having anti-diabetic, analgesic, anti-inflammatory, anticancer, antidepressant and bronchodilatory activities ^[19] .
<i>Zingiber officinale</i> Roscoe	Having hypoglycaemic ^[20] , hypolipidemic ^[20] anti-thrombotic ^[21] and anti-inflammatory ^[22] activities.

All the ingredients are found to possess anti-inflammatory and analgesic activities in common.

Mode of Action of NK

NK is a unique formulation designed for diseases of the respiratory tract like *Swasa*, *Hikka* and *Kasa*. The main *Dosha* involved in *Swasa* are *Vata* and *Kapha*. Due to excessive intake of *Kapha* aggravating food and regimen the *Kapha* along with *Vata* gets into *Pittasthana* and causes *Swasa* which is an *Amashaya Adishtitaroga*. This pathology is also applicable to *Hikka* also. *Kasa* is caused by *Apanavata* vitiation and it's *Pratilomagati* (upward movement) to chest region. This creates pain in chest region and *Kantoparodha* (obstruction to throat) leading to *Bhinnakamsyopamadhvani* (hoarseness in voice) and *Kasa*.

Among the ingredients of NK, two ingredients are having the dominance of *Katu Rasa*, *Laghu*, *Guna Madura Vipaka*, *Ushna Virya* and *Vatakaphahara* properties. One ingredient is *Madura rasa* and *Katu Vipaka*. These drugs are generally *Deepana* and *Pachana*. Even though all are with *Grahi karma*, they does *Soshana* of *Kapha*. Thus in a nutshell, the formulation acts by *Samudaya prabhava* (combinational effect) of the ingredients and removing the obstruction made by *Kapha* in the *Pranavaha Srotas* (by *Anulomana* and *Srotoshodhana*) thus leading to the *Samprapti Vighatana* and relieves the symptoms pertaining to *Swasa* and *Kasa*.

CONCLUSION

NK is a medicine unique to Kerala Ayurveda tradition. As there is difference in the proportion of

ingredients and different pharmaceutical companies utilizes different proportions and different source plants, it needs urgent steps for standardization.

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