

## MANAGEMENT OF *NABHIPAKA* (OMPHALITIS) IN NEONATES WITH *RAJANIYASHTIYADI CHURNA*: A CASE SERIES

\*<sup>1</sup>Dr. Sudesh Pardhi, <sup>2</sup>Dr. Ajay Kumar and <sup>3</sup>Dr. Ankita Hullule

<sup>1</sup>MD Kaumarbhritya, ITRA, Jamnagar, Group-A Medical Officer, Govt. of Maharashtra.

<sup>2</sup>PG. Scholar, Department of Kaumarbhritya; ITRA, Jamnagar.

<sup>3</sup>MD Panchakarma, ITRA, Jamnagar, Group-A Medical Officer, Govt. of Maharashtra.

Article Received on  
01 April 2025,

Revised on 21 April 2025,  
Accepted on 11 May 2025

DOI: 10.20959/wjpr202510-36589



\*Corresponding Author

**Dr. Sudesh Pardhi**

MD Kaumarbhritya, ITRA,  
Jamnagar, Group-A Medical  
Officer, Govt. of  
Maharashtra.

### ABSTRACT

The umbilical cord acts as a vital conduit during fetal development but becomes a vulnerable site for infection after birth if not managed appropriately. Omphalitis, the inflammation of the umbilical stump, poses a serious risk of progressing to systemic sepsis, which can lead to significant morbidity and mortality in neonates. The practice of *Nabhinal Paricharya*, as detailed in Ayurvedic texts like the Samhitas, emphasizes the importance of hygiene and wound healing in neonatal care. This case series investigates the use of *Rajaniyashtiyadi Churna*, an Ayurvedic formulation, in addressing early signs of umbilical cord infection. The outcomes of the study highlight its effectiveness as a safe, affordable, and accessible alternative to conventional antiseptics, offering a promising avenue for enhancing neonatal healthcare practices.

**KEYWORDS:** Umbilical Cord Care, *Nabhipaka*, *Rajaniyashtiyadi Churna*, *Nabhinala Paricharya*, Omphalitis.

### INTRODUCTION

Neonatal care is particularly critical, as infants are highly vulnerable to infections, especially those related to the umbilical cord, the first site of potential injury after birth. The umbilical cord is cut at birth, creating a fresh wound vulnerable to microbial invasion. Improper care of the umbilical stump can result in complications such as local sepsis, septicemia, tetanus neonatorum, portal vein thrombosis, peritonitis, and umbilical hernia. Omphalitis, characterized by periumbilical erythema, swelling, and purulent discharge, demands urgent

care to prevent systemic spread. In developed nations, its incidence is low (<1%) but can be as high as 0.7% in hospitalized preterm infants.<sup>[1]</sup>

Within Ayurveda, neonatal care is guided by the concept of *Nabhinal Paricharya*, as described in Charaka Samhita.<sup>[2]</sup> This approach focuses on the proper care of the umbilical stump using various herbal remedies. These treatments are believed to possess properties that not only enhance healing but also prevent infections, thereby addressing the root cause of complications.

Modern medicine has undoubtedly made remarkable progress in neonatal care. However, the reliance on chemical-based treatments often brings concerns about potential side effects, allergic reactions, and long-term resistance to medications. In contrast, Ayurvedic practices offer natural and evidence-based alternatives that are safe and effective. The preparation and application of *Rajaniyashtyadi Churna*, derived from traditional formulations, exemplify this approach. *Rajaniyashtyadi Churna*, composed of *Haridra*, *Yashtimadhu*, *Lodhra*, and, offers antimicrobial, anti-inflammatory, and wound healing benefits, making it a rational choice for umbilical care.<sup>[3]</sup>

This study aims to evaluate the efficacy of *Rajaniyashtyadi Churna* in preventing *Nabhi Paka* (umbilical sepsis) among neonates. By exploring the outcomes of this ancient remedy, the research seeks to highlight its role in neonatal care and its potential contribution to the broader scope of Ayurvedic treatments. Additionally, this study underscores the importance of integrating traditional wisdom with modern clinical practices to achieve optimal healthcare outcomes for the most vulnerable patients—newborns.

## **MATERIALS AND METHODS Study Design**

A prospective observational case series was conducted at the Department of Kaumarbhritya.

### **Drug: *Rajaniyashtyadi Churna***

#### **Mode of Application**

- Method: *Avachurnana* (sprinkling of powder)
  - Dose: 1 pinch (approximately 100 mg), 3 times daily
  - Duration: 5 to 7 days or until clinical resolution
- Ingredients of are given in the table no.1

**Inclusion Criteria**

- Term neonates with signs of early omphalitis (redness, swelling, minimal discharge).

**Exclusion Criteria**

- Severe systemic infection
- Requirement of systemic antibiotics
- Congenital anomalies of the abdominal wall.

**Case Selection**

Three newborns were selected presenting with classical signs of localized umbilical infection without systemic involvement.

**Case Presentations****Case 1**

- History: Full-term normal vaginal delivery (FTNVD), female infant, aged 36 hours, birth weight 2.6 kg.
- Clinical findings: Redness and mild swelling at the umbilical stump.
- Treatment: Avachurnana with Rajaniyashtiyadi Churna.
- Outcome: Complete resolution of inflammation by Day 5 without adverse effects.

**Case 2**

- History: FTNVD, female infant, aged 30 hours, birth weight 2.2 kg.
- Clinical findings: Redness with mild induration around the umbilical base.
- Treatment: Application of Rajaniyashtiyadi Churna.
- Outcome: Rapid improvement noted within 3 days; full recovery by Day 6.

**Case 3**

- History: FTNVD, female infant, aged 72 hours, birth weight 2.6 kg; difficulty in breastfeeding necessitating top feeding.
- Clinical findings: Umbilical elongation, redness, swelling; irritability noted.
- Treatment: Avachurnana initiated.
- Outcome: Significant clinical improvement observed by Day 4, complete healing by Day 7.

### Pathogenesis (*Samprapti*) According to Ayurveda

Etiological factors include:

- *Nidana* (causes): Non-aseptic cord cutting, poor maternal diet (*Matrja Ahara*), contaminated clothes, *Dushta Stanya* (impure breast milk), trauma (*Abhighata*), premature or improper cutting (*Asamyak Nabhinadi Kartan*).
- Dosha involvement: Predominantly *Pitta* and *Kapha* doshas aggravated, leading to vitiation of *Rasa* and *Rakta dhatus*.
- *Srotodushti*: Affliction of *Rasavaha* and *Raktavaha srotas*.
- *Doshic* dominance: *Pitta-Kapha prakopa* causes localized infection and suppuration (*Pakavastha*).

### RESULTS

All three cases demonstrated:

- Substantial reduction in redness and swelling
- Absence of pus formation or systemic spread
- No observed adverse reactions
- Quick recovery within 5–7 days

Photographic evidence pre- and post-treatment depicted a notable reduction of inflammation and complete wound healing shown in Image 1,2, and 3.

### Tables

**Table No. 1: Ingredients of *Rajaniyashtiyadi Churna*.**

Sr. No.	<i>Dravya</i>	Botanical Name	Part used
1.	<i>Haridra</i>	<i>Curcuma longa</i>	Rhizome
2.	<i>Yashtimadhu</i>	<i>Glycyrrhiza glabra</i>	Root
3.	<i>Lodhra</i>	<i>Symplocos racemosa</i>	Bark
4.	<i>Priyangu</i>	<i>Callicarpa macrophylla</i>	Flower

**Images****B.T.****A.T.****Image No. 1: Before and after treatment images of case No. 1.****B.T.****A.T.****Image No. 2: Before and after treatment images of case No. 2.****B.T.****A.T.****Image No. 3: Before and after treatment images of case No. 3.**

## DISCUSSION

Neonatal septicemia remains a significant concern in pediatric healthcare, particularly in resource-limited settings, where improper umbilical cord care frequently becomes the entry point for infections. The prevalence of pathogenic infections in developing countries can be attributed to unhygienic practices such as using non-sterilized instruments for cutting the umbilical cord, improper techniques in cord ligation, and inadequate sanitation. These factors create an environment conducive to infections like *Nabhi Paka*, which can lead to severe systemic complications and jeopardize neonatal health.

To address this pressing issue, this study incorporates the principles of *Nabhinala Paricharya* as described by Acharya Charaka, applying the traditional Ayurvedic remedy, *Rajaniyashtiyadi Churna*, for managing *Nabhi Paka*. This formulation offers a safe, natural, and side-effect-free alternative to modern treatments, which are often associated with allergic reactions and antimicrobial resistance. The key ingredients of *Rajaniyashtiyadi Churna*—*Haridra*, *Yashtimadhu*, *Lodhra*, and *Priyangu*—are known for their potent therapeutic properties, which work synergistically to combat the condition effectively.

*Haridra* (*Curcuma longa*) *Haridra* possesses *Tikta* and *Katu Rasa*, with *Katu Vipaka*, *Ushna Virya*, and *Laghu-Ruksha Guna*. It is *Tridosahara*, especially *Kapha Shamaka*, making it highly effective in reducing inflammation and infection. As a *Shothahara*, *Vedanasthapaka*, *Kusthaghna*, and *Vranaropaka*, it promotes wound healing and cleansing (*Vranashodhaka*).<sup>[4]</sup> Additionally, its antibacterial, anti-inflammatory, antioxidant, and wound-healing properties make it a crucial component in addressing *Nabhi Paka*.<sup>[5]</sup>

*Yashtimadhu* (*Glycyrrhiza glabra*) *Yashtimadhu* is characterized by *Madhura Rasa* and *Vipaka*, *Sheeta Virya*, and *Vata-Pitta Shamaka* properties, with an emphasis on *Pitta Shamaka*. It acts as a *Dahashamaka*, *Vedanasthapaka*, and *Shothahara*.<sup>[6]</sup> Its mucoprotective and tissue-regenerative capabilities, along with anti-inflammatory and antimicrobial effects, contribute significantly to the prevention and healing of umbilical infections.<sup>[7]</sup>

*Lodhra* (*Symplocos racemosa*) Known for its *Kashaya Rasa*, *Katu Vipaka*, and *Sheeta Virya*, *Lodhra* is effective as a *Kaphapitta Shamaka*. It acts as a *Raktastambhaka* (hemostatic), *Sankochaka* (astringent), and *Vranaropaka* (wound-healing agent).<sup>[8]</sup> Its antimicrobial and anti-inflammatory properties further enhance its ability to promote wound contraction and reduce inflammation at the umbilical site.<sup>[9]</sup>



*Priyangu* (*Callicarpa macrophylla*) *Priyangu* displays *Tikta*, *Kashaya*, and *Madhura Rasa*, *Katu Vipaka*, and *Sheeta Virya*. It is *Tridoshahara*, with a focus on *Pitta Shamaka* action.<sup>[10]</sup> As a *Vedanasthapaka*, *Dahaprashamaka*, and *Twakadodhahara*, it contributes to the antibacterial, astringent, and anti-inflammatory effects that are essential for skin healing and infection prevention.

All the components of *Rajaniyashtiyadi Churna* work collectively as *Pitta-Kapha Shamaka*, *Vedanahara* (pain relievers), *Shothahara* (anti-inflammatory agents), *Dahaprashamaka* (soothing agents), and *Raktaprasadaka* (blood purifiers). These pharmacodynamic properties, coupled with their antimicrobial and wound-healing actions, make them exceptionally effective in breaking the pathogenesis (*Samprapti Vighatana*) of *Nabhi Paka*. The local application of this formulation addresses both the symptomatic and root causes of the condition, promoting faster healing and preventing systemic involvement.

Moreover, the affordability and accessibility of *Rajaniyashtiyadi Churna* enhance its practicality, especially in rural and resource-constrained settings where modern medical treatments may not be readily available. Its usage aligns with the Ayurvedic emphasis on safe, holistic, and sustainable healthcare, offering a valuable alternative for neonatal care.

## CONCLUSION

*Rajaniyashtiyadi Churna* demonstrates promising results in the management of early omphalitis in neonates. It effectively reduces umbilical inflammation, prevents secondary infections, and promotes natural healing without adverse effects.

Incorporating traditional Ayurvedic practices like *Nabhinalaa Paricharya* in modern neonatal care can bridge gaps in healthcare delivery, particularly where advanced resources are scarce.

Larger, controlled clinical studies are warranted to validate these findings and potentially establish *Rajaniyashtiyadi Churna* as a standard protocol for umbilical cord care in Ayurveda-integrated health systems.

## REFERENCES

1. Janssen PA, Selwood BL, Dobson SR, Peacock D, Thiessen PN. "To dye or not to dye: A randomized clinical trial of a triple dye/alcohol regime versus dry cord care." *Pediatrics*, 2003; 111(1): 15-20.
2. Tripathi B. editor, Hindi commentary, in *charaka Samhita Reprint*, Shashir sthana

- Chapter 8, verse 44, Varanasi India, Chaukhamba publication, page no. 966.
3. Vagbhatacharya shankar lal Harishankar, *Ras Ratna Samuchhya*, Chapter 22, Verses 155-156, Khemraj publications.
  4. Sharma PV Dravyaguna Vigyana Part 2, reprint Varanasi India, Chaukhamba Bharti Academy, 2005; page 163.
  5. The Ayurvedic Pharmacopoeia of India, part-1, volume-1, Department of Ayush, Ministry of Health & Family Welfare, Government of India, herb no. 30: p. 60.
  6. Sharma PV Dravyaguna Vigyana Part 2, reprint Varanasi India, Chaukhamba Bharti Academy, 2005; page 254.
  7. Indian Herbal Pharmacopoeia Revised New Edition, India: Indian Drug Manufacturers Association IDMA., 2002; 243-52.
  8. Sharma PV Dravyaguna Vigyana Part 2, reprint Varanasi India, Chaukhamba Bharti Academy, 2005; page 616.
  9. Find Anonymous, The Ayurvedic Pharmacopoeia of India. New Delhi: Controller of publications, Government of India, 1999; 1: 112.
  10. Sharma PV Dravyaguna Vigyana Part 2, reprint Varanasi India, Chaukhamba Bharti Academy, 2005; page 782.