



## A Literary Review on Nabhi Rogas in Newborns and Infants

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### ABSTRACT

Ayurved is the oldest science of life. The first cut wound which the newborn gets is at birth during Nabhinala Paricharya (umbilical cord examination) as explained in ayurvedic texts. In Kaumarabhritya, there is description of two types of Nabhi Rogas (Umbilical disorders). First, disorders which occur due to improper cutting of umbilical cord and second are the independent disorders of umbilicus. Due to improper Nabhinala Paricharya babies are more prone to develop complications such as Ayaam, Vyayaam, Uttundita, Pindalika, Vinamika, Vijrambhika and other disorders such as Nabhi-paka, Anunnata Nabhi, Unnata Nabhi, Nabhi-tundi etc. Also due to improper umbilical stump care may lead to infection and other complications such as Umbilical sepsis, Umbilical Granuloma, Umbilical hernia, Umbilical polyp, sometimes hemorrhage from umbilicus etc. Umbilical cord infections have for centuries caused deaths in neonates. In Ayurvedic texts, acharyas have explained various local applications and procedures for the management of such complications. The management of the stump during its separation from the body and the care of the ulcer subsequently formed are surgical procedure upon which depends the health of and perhaps the life of the infant. If the wound be improperly managed so that infection results the child comes into serious danger.

**Keywords:** Nabhi roga, Nabhi, Umbilicus.

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### INTRODUCTION

Nabhi is one of the connecting structure between the fetus and the mother during intra-uterine life [2]. The concept of nabhi in Ayurved is many folded concept. It can be considered as *koshthanga* (large spaces of body which accommodate the organs), as *marma* (vital areas of body), as *sira* (vein), and *dhamani prabhava sthana* (origin area for arteries). Ayurved is a scientific text which covers all the aspects of modern anatomy. Each one of us take origin from connection between our navel with the mother's heart (circulation) while in her womb. The circulation or the supply of blood and nutrients to the miniature child in mother's womb passes through ones umbilicus or navel. Once the child is born, connection between the child and mother is cut off by cutting the umbilical cord which connects them. Thus navel or umbilicus is an important part of our body and defines our origin and existence. Nabhi rogas are the diseases of Nabhi which occur if the cutting of umbilical cord of a newborn is not done in a prescribed manner will definitely vitiate the *vata dosha* (physiological entity which manages all movements in mind and body), resulted in different kind of diseases of umbilicus which should be treated as early as possible. Since no literary review has been done on nabhi roga, so my purpose of study is to collect all the references for nabhi roga explained in different *samhitas*.

### CLASSIFICATION

**TABLE 1: Types of disease according to improper cutting of umbilical cord [3]**

Immediate Complications	Late Complications
• Ayaam	• Pindalika
• Vyayaam	• Vinamika
• Uttundita	• Vijrambhika

TABLE 2: According to different Acharyas

<i>Charak samhita</i>	<i>Ashtang samgraha</i>	<i>Arogyaraksha kalpadruma</i>
<i>Aayaam</i>	<i>Vinamika</i>	<i>Nabhipaka</i>
<i>Vyayaam</i>	<i>Vijrambhika</i>	<i>Nabhi tundi</i>
<i>Uttundita</i>	<i>Anunnta nabhi</i>	<i>Nabhyama</i>
<i>Pindalika</i>	<i>Unnata nabhi</i>	<i>Pralambika</i>
<i>Vijrambhika</i>	<i>Nabhi-tundi</i>	

**DEFECTIVE SEPERATION OF CORD**

Cutting of the umbilical cord in an improper way leads to many complications. This may be due to early cutting, late cutting, delayed cutting, pulling while cutting, improper way of holding, milking, faulty method of tying the band etc [4].

According to *Charaka*, complications are as follows:

- Immediate complications after improper cutting of umbilical cord.
- Late complications of improper cutting of umbilical cord.

**IMMEDIATE COMPLICATIONS****1. AAYAAM**

Elongation of umbilicus by improper cutting of umbilical cord.

**CHIKITSA**

- Internal administration of drugs like *bala-goudhumadi kashayam*(decoction containing *Sida cordifolia*, *Triticum aestivum* etc) and *balaa- dhatrayaadi kashayam*(decoction of *sida cordifolia*, *Embilica officinalis* etc).
- If the complications persist inspite of drug use, *dahakarma*(cauterization) is to be done around the umbilicus.
- Thereafter post-operative treatment of *agnikarma*(therapeutic heat burn) should be adopted.[5]

**2. VYAYAAM**

*Vyayaam* simply indicates a large umbilicus. But signs of herniation are not yet seen in *vyayaam*, however it is described as an abnormal condition. *Vyayaam* may be considered as one of the stages of umbilical hernia.

**3. UTTUNDITA**

It shows features of both *aayaam* and *vyayaam* i.e elongation and enlargement.

**LATE COMPLICATIONS****4. PINDALIKA**

In this condition, herniation is circular(*parimandal yukta*) i.e rounded swelling - Umbilical granuloma, polyp.

**5. VINAMIKA**

Here the umbilicus is inflamed and centrally depressed, elevated near the edges and concave in the middle - umbilical cyst/swelling.

**6. VIJRAMBHIKA**

A fluctuating/pulsatile swelling is present at umbilical region. Raised and depressed frequently - umbilical hernia. [6]

**CHIKITSA**

Carefully observing the seriousness or mildness of afflicted *doshas*(physiological entities of body), these conditions should be treated by

- Massage
  - Uction(rubbing of medicated powder mixed with oil)
  - Sprinkling of ghee
  - Intake of ghee,
- prepared of drugs which are not irritant but alleviators of *vata* and *pitta*(physiological entity governs digestion, metabolism and transformation in the body).
- Suppuration of the umbilicus is caused by *pitta*, *vata* is responsible for the morbidity of the umbilicus like *aayaam*, *vyayaam*, *uttundita*. In such conditions, the *dosha* which is more seriously affected should be taken into account and the others which are less afflicted are to be neglected for the purpose of treatment and various drugs to be selected accordingly.[7]
- NABHI PAKA**
- The disease is explained in *arogya kalpadruma* as a complication of improper cutting of umbilical cord. This disease pathogenesis is presented with oozing of pussy fetid discharge from umbilicus. Rarely this disease is presented with pain and edematous swelling of umbilical region.

If the lesion is devoid of swelling and pain, the drugs *kushtha*(*Saussurea lappa*) and *amalaka* (*Embilica officinalis*) are heated together in a mud vessel is powdered and smeared over the diseased part cures the affliction [8]

#### CHIKITSA

##### As mentioned in arogya kalpadurma.

The coconut oil medicated with the decoction of the drugs *musta*(*Cyperus rotundus*), *kushtha*, *nisa*(*Curcuma Longa*), *yashti*(*Glycyrrhiza Glabra*) and *dhatri* added with the *kalka*(paste) of drugs *bala* and *madhuka*(*Glycyrrhiza glabra*) is administered either as simple external application, poured over the diseased site, or a piece of cloth soaked in the medicated oil is placed over the diseased part, cures the disease.

If the lesion is presented with the pain and edematous swelling, even though the above mentioned treatment is enough, the drugs such as *durva*(*Cynodon dactylon*) and *yashti* is grinded in the decoction made with the drug *bala* or coconut milk, is applied initially to relieve the pain and swelling is advisable. After the swelling and pain subsides the above said treatment procedures are enough.

If the pathogenesis is intended to be spread to the *mamsa dhatu* (muscle tissue), the coconut oil medicated with the juice of *durva* added with the *kalka* of *madhusnuhi* (*Smilax china*) is administered internally cures the condition.

When the suppuration is surged in to the *mamsa dhatu*, is strenuous to cure the affliction. The wound may heal without changing the nature of umbilicus will be changed due to healing.[9]

- **According to charaka**

If there is suppuration of umbilical cord, the oil boiled with the paste of *lodhra*(*Symplocos racemosa*), *madhuka*(*Glycyrrhiza glabra*), *priyangu*(*Callicarpa macrophylla*), *suradaru*(*Cedrus deodara*) and *haridra*(*Curcuma longa*) should be applied. These very medicines which are prescribed to be used for the preparation of oil should be made to a powder and sprinkled over the suppurated umbilicus.[10]

- **According to rasa ratna samucchaya**

In *nabhi paka* of children *lepa*(ointment) of *haridra*, *yashtimadhu*, *lodhra*, *priyangu kalka* with *siktataila* should be done. Same drugs are used for sprinkling.[11]

- **According to ashtanga sangraha**

*Kalka* of *madhuka*, *lodhra*, *nisha*, *shyama* are taken and *tailapaka* is done. This *taila* is used to do the *abhyanga*(massage) and also used for *avachoornana*(sprinkling) by *kalka* drugs.[12]

- **According to yog-ratnakara**

*Nisha*, *lodhra*, *priyangu*, *madhuka kwath*(decoction) is prepared. Afterwards *taila* is prepared. Fecal material of goat is mixed with milk. Otherwise *panchvalkala choorna*(powder of barks of five herbs including *figs racemosa*, *figs religiosa*, *figs benghalensis*, *figs lacor* and *thespesia populnea*) or *chandana choorna*(powder of *santalum alba*) is used for *avachoornana*. [13]

- **NABHI TUNDI**

Vitiated *vata* along with vitiated *pitta* swells up the umbilicus presented with pain is known as *nabhi tundi roga* [14].

#### CHIKITSA

- As mentioned in *arogya kalpadurma*, the drugs such as *satahwa*(*Antheum sowa*), *sarja niryasa*(extract of *Vateria indica*), *saireyaka*(*Barleria prionitis*) and *bala* is mixed together and powdered well. This is then mixed with *tila taila*(sesame oil), is applied over a piece of cloth and tied around the umbilical region cures the disease. The drug *satahwa* is grinded with the juice of the drug *bhunimbadi* (*Andrographis paniculata*) is heated under the sunlight is applied over the diseased part is also beneficial to cure the affliction.

*Balahapushadi kwatha*- The decoction of drugs *bala*, *hapusha*(*Juniperus communis*), *devahwa*, and *lasuna*(*Allium sativum*) added with ghee is administered internally cures the disease.

The decoction of the drugs *indravalli* (*Citrulus colocynthis*), *abhaya*(*Terminalia chebula*), *hapusha* and *misi*(*Antheum sowa*), added with ghee, is administered internally cures the disease [15].

- As per *sushruta* in *nabhi tundi vatahara chikitsa* should be followed especially by *snehana*(oleation), *swedana*(fomentation), *upanaha*(bandage fomentation).[16]

- **NABHYAYAMA**

Improperly incised umbilical cord leads to the vitiation of *vata*, is need not necessarily produces any discomfort due to the nature of time or due to the influence of *daiva*(divine spirits). When these influencing effects turn hostile, will produce the spasm of umbilical region causes the leftward or rightward stretch of umbilicus, known as *nabhyayama* [17].

**CHIKITSA**

- *Balatrayadi kashaya*- The decoction made with the drugs containing three varieties of *Sida cordifolia*, *saliparni* (*Desmodium gengeticum*), *prusniparni* (*Ureria picta*), *rasna* (*Inula racemosa*) etc added with ghee, is administered internally cures the disease *nabhyayama*.
- *Balagoudhumadi kashaya*- The decoction of the drugs containing *bala*, *goudhuma*, *devahwa*, *jivanti* (*Leptadenia reticulata*) etc added with *guda* (Jaggery) and *saindhava* (Rock salt) is administered internally cures the disease *nabhyayama*.
- If the disease occurred in the child of *jata matra* (new-born) phase is not subsided by the above said decoctions, there won't be any more medicaments to be given. But for the child above three months old, the treatment described in the following is carried out. A piece of iron, in the size of a little finger of the child is taken and the one end is made smooth. It is then heated well in fire and used to apply heat around the umbilicus on upper side, lower side, left side and right side. The site of applying heat is measured as half of the width of a finger away from the root of umbilicus. The afflictions such as burning sensation etc, are taken to be treated with proper medicaments.[18].
- **PRALAMBIKA**  
The vitiated *vata* swells up the the umbilical region in the size and shape of a bowl is diagnosed as *pralambika nabhiroga*.  
Clinically *pralambika* manifests in two ways:  
a. With inflammation (*sarujam*)  
b. Without inflammation (*nirujam*)  
The *nirujam* type is self-limiting and requires no particular treatment.  
*Sarujam* type calls in for urgent treatment which is inevitable. In spite of treatment, if it goes *pakwawastha* (ripened form), prognosis is poor [19].

**CHIKITSA**

The treatment described for the disease *tundi* is also very applicable here in this disease too [20].

- **NABHIVRANA AND ANUNNATA NABHI**  
After the cord fall off at times in and around the stump area there will be production of an ulcer, which will not heal easily. There is delay in formation of normal tissue and that area is not raised. This is called as *anunnata nabhi* [21]

**CHIKITSA**

For the purpose of healing, the wound should be applied with *ashwagandha* (*Withania somnifera*), *ajavid* (excreta of goat), *Yashtimadhu choorna* mixed with *ghrita* [22].

- **UNNATA NABHI**  
If even after falling off the *nabhi* on the 5<sup>th</sup> day or not falling by fifth day and if it is elevated, inflamed, congested area remains, then it is called *unnata nabhi*.

**CHIKITSA.**

Fecal material of goat is burnt and that powder is used for *avachoorana* [23]

**DISCUSSION**

After literary review of *Nabhi rogas*, it is found that various *Nabhi rogas* has been explained by different *acharyas*. Since this is a literary review some of the disorders explained in *Ayurved* can be correlated with that explained in modern texts like *Pindalika* with Umbilical granuloma/polyp, *Vinamika* with Umbilical cyst/swelling, *Vijrambhika* with Umbilical hernia as their signs/symptoms resembles each other. Other disorders like *Nabhi shotha* has also been explained by *Yog Ratnakara* and *Nabhi kundala* by *Rasa Ratna Samucchaya* [1-23].

**CONCLUSION**

*Nabhi rogas* are mainly seen in newborns and infants, which needs an early intervention. Umbilical infection is indeed one of the greatest dangers to which newborn is exposed. It is a true medical emergency that can rapidly progress to neonatal sepsis and death, with an estimated mortality rate between 7% and 15%. There are many researches done on study of herbal formulations on different *Nabhi rogas*, but no study has been found on literature review of *nabhi rogas*.

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