
“SHORT REVIEW ON KSHIRBALA TAILA ABHYANGA ON LOW BIRTH WEIGHT NEONATES FOR WEIGHT GAIN ”

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ABSTRACT-

Low birth weight is a commonly seen problem in neonates born in India with the current incidence rate at a staggering %. It has mainly 2 causes viz. pre-term babies and IUGR delivered at full term. Such babies are at a higher risk of birth asphyxia, hyperviscosity of blood, temperature fluctuations, metabolic disorders, ossification abnormalities and congenital malformations. In Ayurveda, it is considered a Vayuvikruti due to which the Kshaya(depletion) of Dhatus (tissues) and Oja (essence of tissues) occurs. According to Panchabhautik formation of Dhatus, it is considered as Vayuvikruti (air element vitiation), Jalavikruti (water element vitiation), Pruthwi vikruti (earth element vitiation) and Agnivikruti (fire element vitiation). In such circumstances, to restore vitiated Vata and to enhance Dhatus, Abhyanga or external oleation is a suitable option to boost the normal growth and development of such LBW babies. Ksheerbala Taila is an ayurvedic preparation mentioned in Ashtanga Hridayam Samhita made from Balamoola (roots of Sida cordifolia), Cow's milk and Sesame oil. Balamoola is known to have enhancing effect on Maansa Dhatu (musculature) and is overall considered balya, bruhaneeya and Vataghna. Godugdha is also considered helpful in enriching the Dhatus of the body. Sesame oil is itself Vataghna and the process of Abhyanga is also known to be Bruhaneeya. Hence, Ksheerbala taila can be of great help in treating such cases of LBW infants. This study is aimed at understanding the role of Abhyanga in such cases in detail which can provide a basis for further studies and trials to provide concrete solutions with a view of preventing further complications of low birth weight babies.

INTRODUCTION

By definition low birth weight babies are neonates with birth weight of 2.5 kg or less. The incidence of low birth weight babies in India varies from 25-30%. Out of these babies about 35-40% are preterm babies and almost 60-65% are IUGR or intra-uterine growth retardation cases. IUGR cases are also known as SFD or small for date babies and are mainly classified as malnourished or hypoplastic babies. Pre-mature babies are at higher risk of birth asphyxia, hypothermia, feeding difficulties, infections, respiratory distress, apneic spells, intraventricular haemorrhage, necrotising enterocolitis, metabolic acidosis, hyperbilirubinemia etc. SFD babies are susceptible to birth asphyxia, meconium aspiration syndrome, hypothermia, hypoglycemia, infections, polycythemia etc. In Ayurveda, these LBW cases can be co-related with Vatavikruti in garbha. The vitiation of Vata dosha is responsible for stunting proper growth of the foetus, resulting in malformation of Dhatus or tissues of the body. The reasons of vitiated Vata can vary in a range of improper nourishment of mother to beejvikruti or vitiated sperm/ovum.

In terms of panchabhautik or elemental vitiation, the air element of Vayu Mahabhut which is responsible for normalcy in genesis of tissues and normal cell division. Vitiation thus causes reduced tissue growth resulting in lesser body weight being formed. The vitiation of water element is responsible for reduced water content in the process of growth hence causing overall reduction in weight. The vitiation of Pruthwi or earth element is responsible for formation of dense tissues such as muscles, fats, fascia and bones. The vitiation of fire element or Agni Mahabhut is responsible for improper digestion of nutrients thus resulting in reduced nourishment to tissues.

The co-relation of LBW in Ayurveda is done with-

1- Garbha shosha- According to Harit Samhita , the vitiation of Vata may result in such LBW babies.

2- Upavishtak- untreated vaginal leakage and discharges in mothers may lead to premature birth or growth retardation thus resulting in LBW babies.

3- Nagodara- The vitiation of Vata resulting in stunted growth of foetus results in LBW babies.

4- Rasakshaya- epltio of fluid content of body results in raukshya dryness of tissues and shosha depletion of tissue).

5- Maamsakshya- depletion of muscle mass in muscular areas such as sockets of the eye, gluteal region,neck region, extremities etc.

6- Medakshaya- resulting in krushangta or reduced weight.

7- Ojakshaya- depletion of oja Dhatu leads to kshaya i.e depletion of overall constituents of body, both qualitatively and quantitatively. It also leads to overall weakness and impaired indriyas or sensory and motor functions.

8- Vatavrudhhi- Vitiation of Vata leads to kaarshya or reduced weight, darkness and dullness of skin, tremors, weakness, sleep disturbances, indriya bhransha (sensory and motor functions loss) etc.

The treatment of this group of vitiation can be principally sumarised as follows :

1) Vataghna chikitsa- i.e by treating the Vaatavardhan Lakshanas.

2) Dhatuwardhan- i.e replenishing tissues using Balya and Bruhaneeya Chikitsa.

3) Ojovardhan- i.e restoring Oja thus carrying out the function of Tushti and Pushti.

There have been previous studies conducted where LBW babies were treated with olive oil massage with the aim of weight gain. However, simply using olive oil does not fulfil the task of carrying out other functions like Ojovardhan, Dhatuposhan etc. For this purpose, Ksheerabala Taila Abhyanga can be considered as a better option. This article will further discuss the utility of Ksheerabala Taila in treatment of LBW babies.

MODE OF PREPARATION OF DRUG:

Balamoola- 1 part

Kshira (Godugdha)- 4 parts

Tila Taila- 16 parts.

Procedure⁴:

Preparation of Balamoolakalka:

Balamoola cut into small pieces. After that it will be taken in Ulukhalayantra and converted in to paste form by grinding.

Tilataila will be taken in steel vessel and heated over Mandagni till complete evaporation of moisture content then stopped the heating process and left for cooling. In the slight hot condition of Taila, Balamoolakalka will be added followed by milk. Again heat will be applied with intermediate stirring. Heating process carried out till Siddhilakshanas appear. And oil will be filtered through clean cloth and stored in glass jar container.

INDICATION OF ABHYANGA

It is a safe procedure which can be done on everyone who is vitally stable, except in certain contra-indications as explained below:

CONTRA-INDICATION OF ABHYANGA

Time at which Abhyanga should be done, for how long it should be performed, which oil should be use according to cold or hot season etc. depends on the Pachakagni of patient. Whenever there is increase in Kapha and Pitta Dosha in body, if person is suffering from indigestion, and if person is

gone through the Shodhana (Panchakarma) processes; in such condition, Abhyanga is contra-indicated. There are few more contra-indications for the Abhyanga of infant.

Immediately after feeding, Baby with hypoglycemia, Sick newborn or infant: Baby with→ lethargy, refusing to feed, and infant having signs of sepsis. Newborn with congenital heart diseases→ like cyanotic heart diseases. Vitaly instable infant.→ Infant with respiratory distress requiring→ oxygen. Exaggerated neonatal jaundice.

AYURVEDIC REVIEW

Abhyanga Technique :

The technique of Abhyanga is not elaborated in the major classics of Ayurveda. First indication about the technique of Abhyanga is found in Rigveda in which Abhyanga is told to be done by hands and digits and the stroke or touch should be gentle. Here, gentle touch should not be taken as the non-application of pressure and rubbing but it implies that these processes should be limited to a point that is easily tolerated by the individual.

Direction of Abhyanga:

Abhyanga should be performed in Anulomagati (in the direction of hairs) for the proper absorption of the oil by follicles. Tiruk has also talked about the direction of Abhyanga according to the Dosha.

Duration of Abhyanga:

Dalhana has decoded the relation of time of Abhyanga with the nourishment of the seven tissues of the body. According to him, the Sneha (oil) used in Abhyanga reaches to the hair follicle in 300 Matra (65 sec, One Matra=16/60 sec). It reaches to Tvacha (Skin), Rakta (Blood), Mamsa (Muscular tissue), Meda (Adipose tissue), Asthi (Bone tissue) and Majja (Bone marrow) in 400 Matra (133 sec), 500 Matra (160 sec), 600 Matra (190 sec), 700 Matra (228 sec), 800 Matra (240 sec) and 900 Matra (285 sec) respectively [5]. So, in accordance with these calculations for a particular part of the body, at least 3 min are needed to perform Abhyanga so that Sneha may penetrate the deepest tissue layer. In children, daily abhyanga is advised.

The Process of Neonatal Massage:

There are no fixed guidelines describing the exact methodology of neonatal massage. Field, in her extensive research, has described a method which has been followed by most studies on massage therapy. The Field's massage therapy consists of both tactile and kinesthetic stimulation. Massage is given in 15 min sessions starting with 5 min of tactile stimulation followed by 5 min of kinesthetic stimulation and ending again with 5 min of tactile stimulation. Three massage sessions need to be performed per day. Most of the studies have given massage treatment for duration of 2–4 weeks. The massage can be given by trained medical professional or by mother. It has been shown that mothers are as effective as trained professional in delivering the massage. A conducive environment needs to be established before initiation of massage. A room with soft light, warm temperature, and low noise levels is ideal. Massage should be given between the feeds and ideally 45 min to 1 h after a feed to avoid regurgitation or vomiting of the feed. It should involve the entire body starting from head, neck, trunk and extremities. A firm stroke with flat of fingers is used during massage therapy. Moderate pressure is shown to be better than light pressure massage in terms of weight gain. In a well-designed study by Mathai et al., the procedure was divided into two phases of tactile stimulation: first phase, the baby is placed prone and 12 strokes of 5 sec each are provided starting from head, neck, shoulder to buttocks; second phase the baby is placed supine, 12 strokes of 5 sec each were given starting from face, cheeks, chest, abdomen, upper limb, lower limb, palms and soles. Third phase consists of

kinesthetic stimulation in which alternate flexion and extension movements are performed at major joints: ankle, knee, elbow and shoulder. The massage can be interrupted for a few minutes when the baby passes stool/urine or cries excessively.

BENEFITS:

Infant Massage Relaxes and Soothes Touch has been shown to decrease levels of cortisol (stress hormone) in our bodies. Infant Massage Deepens Bonding During massage, oxytocin is released in both the giver and receiver's body. Oxytocin helps to provide us with loving, nurturing feelings which in turn help us to bond. Infant Massage Improves Communication Infant massage increases the caregiver's confidence and sensitivity to baby's unique cues and forms of communication. Infant Massage Contributes to Development: Infant massage stimulates growth and healthy development of baby's body, mind, and spirit. Nurturing touch helps to enhance the digestion process by stimulating our food absorption hormones, glycogen and insulin. Infant massage has also been shown to be effective at reducing the symptoms associated with constipation, gas, and colic. Infant Massage Helps Baby to Sleep Better Not only does massage help baby to release the stress that builds daily from new experiences, it allows him to relax. Massaging a baby has been shown to encourage him to sleep deeper and for longer periods of time. Help in Weight and Height Gain The skin of a preterm infant allows significant absorption of fat; since it is thinner and more vascular. This may also result in greater caloric intake and consequently a better weight gain. Other Benefits Benefits may include improved skin condition and barrier function, resulting in reduced loss of transepidermal water and improved thermoregulation; absorption of fatty acids, contributing to improved nutrition; better somatic growth, neuro-development and infant-parent bonding; and improved skin integrity and reduced risk of nosocomial infection.

DISCUSSION

Though breast feeding is more or less universal in our country, extra nutrients are often needed for the babies because of limited capacity of the stomach and immaturity of fat metabolism. Though our studies could not ratify this finding, prematures are said to absorb oil better because of increased vascularity and permeability of their skin. There are many techniques developed globally for neonatal massage. Massage is not the daily routine procedure like Abhyanga, and should be contraindicated in inflammatory conditions, fractures, sprains and strains; while Abhyanga is mainly concerned with the digestion and Kapha Dosha predominance in body of individual. It also promotes parent-infant bonding and early social development^{7,8}.

CONCLUSION

Ayurveda infant care protocols are very scientific; researchers of present era prove the scientific background of all these procedures. Abhyanga (Massage) is one of this protocols which include stimulation of circulatory and gastrointestinal systems, better weight gain, lesser stress behavior, positive effects on neurological and neuromata development and infant-parent bonding, and improved sleep. With proper selection of oil and with certain precautions under medical supervision and advice one can practice Abhyanga from birth to infantile age without any harm which is the key massage to modern health world.

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