



Review Article

ABHYANGA IN NEW BORN BABY AND NEONATAL MASSAGE - A REVIEW

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ABSTRACT

Neonatal period is very crucial phase of life. One has to provide systematic, luxurious and sophisticated neonatal care. Ayurveda mentioned very scientific approach toward newborn care as *Jatamatra Paricharya*; means a protocol. *Abhyanga* is one of these care protocols. Neonatal massage with lubricant is in practice around the world and resembles with Ayurveda *Abhyanga* process. In vitally stable neonates *Abhyanga* can be done with particular precaution considering the indications and contraindications. *Abhyanga* and massage are not totally identical. *Abhyanga* increases the strength, nourishes body, improves skin texture and accelerates the healthy growth and development of newborn. Increased weight gain, reduced pain, enhanced attentiveness, reduced depression and enhanced immune function (increased natural killer cells and natural killer cell activity) are some advantages of newborn massage. During *Abhyanga* prevent harmful and painful practices and social taboos, like stretching of limbs, pulling of ear and nasal cartilages etc should not be practiced. Oil which is suitable for baby according to local conditions should be use. *Bala Taila* is one of the best oil among the all oil preparations in Ayurveda. Hence though *Abhyanga* is consider as complimentary and traditional ancient practice, it is very useful for the healthy newborn and contribution to modern health society. The present article is a systematic review of the neonatal massage across the world to establish the role of Ayurveda newborn care protocols having potential to contribute neonatal health, as key message to modern health world.

Key words: *Abhyanga*, Neonatal Massage, *Jatamatra Paricharya*, *Bala Taila*.

INTRODUCTION

Newborn period is extremely critical phase of life. This period is foundation of adult human life. Neonatal care is therefore very important area of health practices and practiced across the world since ancient time of human civilization. There are different communities practicing different kinds of newborn care. The difference in practices or difference in sequence of practices is because of difference in geographical conditions, climatic difference and evolution over a period of time. In India traditional newborn care is going on till date. Most of the traditional newborn rearing practices were adapted from ancient health system like Ayurveda which had explained the newborn care in sequential way. All these procedures are like protocol and have scientific background, and termed as *Jatamatra Paricharya*. Considering the smooth transition of new born baby Ayurveda explained very delicate and sophisticated protocol for newborn baby

under *Jatamatra Paricharya*. *Abhyanga* is one such a procedure that should be performing for the good health of newborn. There are some methods for application of oil over body; like *Samvahana*, *Parisheka*, *Abhyanga*, and *Mardana*. *Parisheka* means sprinkling of oil and is useful immediately after birth to relieve the stress of labor while passing through birth canal and alleviate the increased *Vata Dosh*. *Samvahana* is application or just smearing of oil over body parts and also useful in newborn care. *Abhyanga* means application of oil or unctuous substances on entire body or body part with optimum pressure and in particular directions and applying the strokes.^[1,2] *Mardana* is application of oil or dry powder over body or body parts with enough pressure along with squeezing of body musculature in appropriate manner. *Parisheka* is included in *Jatamatra Paricharya* but *Abhyanga* is not directly quoted in protocol. For healthy individual

Abhyanga is helpful to prevent premature aging, relieves the stress of daily activity and nutritious, hence doing the *Abhyanga* to newborn baby is very helpful for healthy growth and development. Neonatal massage is one which applied in some part of world having resemblance with *Abhyanga*, but there are some differences between these two procedures. The word massage (Oxford Dictionary) infers rubbing or kneading the skin with the hands to stimulate or manipulate^[3]. Although massage is a more active exchange and can be stimulating, it can also be soothing and relaxing. Any stimulation is better when performed in a developmentally sensitive manner, and massage is no exception to this rule. Massage strokes should only be initiated when the baby shows signs of being able to tolerate positive still touch, i.e. without displaying behavioral and physiological instability. Parents will often stroke and massage instinctively, but the way a baby is moved, and protected from becoming disorganized, is an important part of teaching massage and vital for safety^[4].

AIMS and OBJECTIVES

1. To review and evaluate the importance of *Abhyanga* and traditional neonatal massage.
2. To discuss the scientific background of the *Abhyanga* or neonatal massage.

MATERIALS AND METHODS

Data and information collected from different personnel practising the neonatal massage in different parts of the country. References from the different kinds of journals, articles, papers and websites. Research papers, dissertations and thesis from different institutes. Reference and text books on pediatrics and neonatology, Ayurveda Samhitas and related texts, news papers and other electronic media sources.

Abhyanga

In Ayurveda *Abhyanga* is described as daily routine practice (*Dinacharya*)^[5] to be followed for healthy individual. In Indian culture *Abhyanga* for newborn baby is practiced too at many places as daily routine. Ayurveda emphasized on *Abhyanga* for prevention of aging process and healthy life. According to different geographical conditions and variation in climatic conditions one has to make difference in the procedure. For example in the cold climatic conditions oil used for *Abhyanga* should be taken as warm and vice versa. In different diseased conditions also different oils are in used; but for

healthy adult sesame oil is the best for *Abhyanga* as it gives strength to body tissues and suitable in various conditions. Sesame oil processed with multiple herbs is considered as the best oil for newborn *Abhyanga*. *Bala Taila*, *Lakshadi Taila*, *Ashwagandhadi Taila*, *Balaashwagandhadi Taila* are different kinds of oil used for *Abhyanga*. *Bala Taila* is the best remedy for newborn *Abhyanga*.^[6]

Care: *Abhyanga* is very basic care in the neonatal care practices. There are several benefits of *Abhyanga*. In general *Abhyanga* of newborn babies is motivated by various cultural and familial foundations, worldwide with different consideration like.

1. Health and protection
2. Emotional well being
3. Beauty purposes

How to do the *Abhyanga* in newborn babies

with cautions: Different methods for doing *Abhyanga* are available in different areas and have been practicing too. Even in the different part of the India one can find the difference in the procedure and way of doing the procedures. For example in north part of India neonatal massage is in practice with mustard oil and generally old experienced women do the *Abhyanga*; on the other hand in south part of country it is in practice with application of coconut oil with manipulation of acupuncture points. Many researchers worked for the same since many years. It is found that, there are some practices, which are harmful for babies. Stretching the limbs, pulling the ear and nasal cartilages, squeezing of the breast nodule to remove collection, slapping the back while massaging, squeezing of abdomen, excessive flexion of trunk, crossing of the legs and arm during massage, excessive extension of the limb joints etc should be avoided as it may create the different neonatal health problems like choking, cyanosis, dislocations, fractures, neurogenic shock, mastitis, excess pain causes the permanent impact on the pain bearing threshold of the baby. But if one doing it in proper way it will be helpful to baby to grow well.

There are certain cautions that should be taken while doing *Abhyanga*.

- *Abhyanga* should be done only after getting the permission from physician.
- It should be done only under medical observation.
- One should take care of umbilical cord and umbilicus while doing *Abhyanga*.

- One should look for and supervised for healing after the fall of umbilical cord.
- Avoid to do *Abhyanga* with too less or too much pressure.
- Avoid the use of oil to which baby is hypersensitive (i.e. causes erythematous rashes, pustules).

Benefits: *Abhyanga* prevents the aging of body tissues, relieves the pain, fatigue and lassitude. Increases the working capacity of senses, nourishes the body, makes the skin fair and attractive, increases the stamina or strength and prolonging the life span of human being.^[7]

All these benefits are of special concern in case of newborn.

- a. Newborn passes through tedious birth process through narrow birth canal and therefore experiencing the fatigue, pain and lassitude.
- b. Newborn skin is very delicate require additional care as compare to adults.
- c. Newborn is in growing phase, and growth velocity is highest in this period of life, which demands continuous nutrition.
- d. Also it is the time of development of central nervous system along with senses.

“Therefore it is very clear that, *Abhyanga* is very essential process for the healthy growth and development of newborn baby.”

When to start: From neonatal point of view *Abhyanga* can be immediately done after birth once the baby gets vitally stable. Then daily once either in morning or evening *Abhyanga* can be done in vitally stable healthy newborn. In case if one fails to start *Abhyanga* after birth, then there is no specific time or indication to start the procedure for the healthy neonate; except the pre-request is that newborn should be vitally stable and no signs of illness or sickness (Lethargy, Refuse to feed, Convulsions, Respiratory distress).

Time of the procedure: One can do *Abhyanga* to baby at any time in the day, but the ideal time to do *Abhyanga* is morning time, while one should take care that, room temperature should not be less than 25°C in order to prevent the hypothermia to baby^[8]. For this purpose warmer, room heaters etc can be use to make the room warm; but one should not use smoke or burning of carbon substances (coal, kerosene, organic substances etc) to warm the room as smoke is hazardous to neonatal lungs. Also keep the

windows closed and no air draughts should be there while doing procedures.

How many days in one setting: One can continue the *Abhyanga* till the completion of infantile age i.e. one year of life, if there is no any other illness disturbing the baby.

Selection of oil or unctuous substances for *Abhyanga*: *Abhyanga* with oil ensures a smooth, gliding surface without friction and therefore touch is better accepted.

From Ayurveda perspective **Sesame oil** is considered as best among all vegetable oils. When oil is medicated with decoctions, milk, minerals, herbal powders and meat soup etc, it is called as *Siddha Taila*. *Bala Taila*^[9] is such combination use for newborn babies. *Bala Taila* increases the strength and nutrition of tissues and helpful to prevent hypothermia.

Indication: It is a safe procedure can be done on every newborn baby who is vitally stable, except in certain contraindications as explained below:

Contraindication: Time at which *Abhyanga* should be do, for how long it should be performed, which oil should be use according to cold or hot season etc depend on the *Pachakagni* of patient. Whenever there is increase in *Kapha* and *Pitta Dosh*a in body, if person is suffering from indigestion, and if person is gone through the *Shodhana* (*Panchakarma*) processes; in such condition *Abhyanga* is contraindicated. There are few more contraindication for the *Abhyanga* of newborn babies.

- Immediate after feeding.
- Baby with hypoglycemia.
- Sick newborn – neonate with lethargy, refuse to feed, and newborn having signs of sepsis.
- Newborn with congenital heart diseases like cyanotic heart diseases.
- Vitally instable neonate.
- Newborn with respiratory distress required oxygen.
- Exaggerated neonatal jaundice.

DISCUSSION

There are many techniques developed globally for neonatal massage. As human birth is continuously going on since the evolution of man, there are so many methods have been going to be developed till date for doing the massage of newborn baby. 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 Dosh*a predominance in body of individual.

How to do the Neonatal massage

Movement begins on the part of the body where the baby seems to like still touch (often the head, hands or feet), with one slow but firm movement at a time. A deeper pressure, than that of a tickle stimulus, has been shown to produce enhanced behavior in response to massage movements. Rhythmical massage movements continue only if the baby remains organized; the parents are encouraged to watch and be ready to change their handling responses as the baby changes. The baby's trust and anticipation - tolerance for massage builds slowly over a number of sessions^[10]. On the other hand *Abhyanga* should be done in the *Anuloma* direction i.e. in the direction of hair follicles (from proximal end to distal end of trunk and extremities). Also some scholars suggest the sequence - Abdomen, chest, shoulders upper and lower limbs and head, neck, face. Some suggest the different sequence as head, neck and face followed by trunk and extremities at the end of procedures.

The moderate pressure massage therapy consisted of the 15-min infant massage therapy protocol. The 15-min stimulation session consists of three standardized 5-min phases, tactile stimulation during the first and third phase and kinesthetic stimulation during the middle phase. During the tactile stimulation phase the infant is placed in a prone position and stroked with moderate pressure (e.g., slight skin color change from pink to white in a Caucasian baby or slight indentations in skin for all infants). The infants are massaged for five, 1-min periods (12 strokes at approximately 5 s per stroking motion) over each region in the following sequence: (1) from the top of the head to the neck and back to the top of the head; (2) from the neck across the shoulders to the neck; (3) from the upper back to the waist and back to the upper back; (4) from the thigh to the foot to the thigh both legs; and (5) from the shoulder to the hand to the shoulder on both arms. During the kinesthetic stimulation phase the infant is placed in a supine position and each arm, then each leg, and finally both legs together are flexed and extended (as in a bicycling motion). Each flexion/extension motion lasts 10 s for a total of five, 1-min segments. The scheduling and

duration of the light pressure massage sessions were identical to the moderate pressure sessions except that light pressure stroking was used during the first and last 5-min periods of the procedure. The middle 5-min period of kinesthetic stimulation remained the same. ^[11] This light pressure massage is like *Samvahana* while moderate pressure massage resembles with that of *Abhyanga*.

Selection of oil for the baby massage

There are different researches carried out for selection of oil and some basic principle should be taken in to consideration before selecting the oil for massage for baby -

- 1) A plant based oil that is easily absorbed into the epidermis, is better for the skin than mineral based oil which can leave a sticky, skin occluding film on the skin's surface.
- 2) Check with a pediatric allergist and the local anaphylactic centre to ensure you use low allergen-risk oil. This may differ depending on the country.
- 3) Refined or purified oil is more likely to be free from any unwanted additives such as yeasts and moulds which can be present in some cold pressed oils. The refining process should also remove any allergens and the shelf life will be considerably extended.
- 4) It is important to use odor-free oil, as most added scents are either chemical or essential oil based.
- 5) Individual bottles (less than 50 ml) avoid cross contamination; the small quantity also ensures that the oil is used quickly which guards against it oxidizing.

Examples of oil that fit the above criteria are refined ***sunflower or fractionated coconut***. Topical use of linoleate-enriched oils may enhance skin barrier function and improve outcome in neonates with compromised barrier function. ^[12]

"Massage in infancy improves growth and post-massage sleep. However, only sesame oil showed significant benefit." ^[13]

Benefits of neonatal massage

Many researches have been going continuously to find the mechanism of newborn massage and to develop the more superior techniques with minimum risk and maximum health benefits for the newborn baby. Moderate pressure massage has contributed to many

positive effects including increased weight gain in preterm infants, reduced pain in different syndromes including fibromyalgia and rheumatoid arthritis, enhanced attentiveness, reduced depression and enhanced immune function (increased natural killer cells and natural killer cell activity) Surprisingly, these recent studies have not been reviewed, highlighting the need for the current review. When moderate and light pressure massage have been compared in laboratory studies, moderate pressure massage reduced depression, anxiety and heart rate, and it altered EEG patterns, as in a relaxation response. Moderate pressure massage has also led to increased vagal activity and decreased cortisol

levels. Functional magnetic resonance imaging data have suggested that moderate pressure massage was represented in several brain regions including the amygdala, the hypothalamus and the anterior cingulate cortex, all areas involved in stress and emotion regulation. Further research is needed to identify underlying neurophysiological and biochemical mechanisms associated with moderate pressure massage.^[14]

“With this discussion it’s very clear that from modern perspective the same principles come into light which had been already explained in Ayurveda.

Table 1: Difference between *Abhyanga* and Massage

Process	<i>Abhyanga</i>	Massage
Method	Always done with application of oil or such <i>Snigdha Dravya</i> (lubricant).	Done with or without lubricant.
Uses	<ul style="list-style-type: none"> • <i>Abhyanga</i> as prior therapy for <i>Panchakarma</i>. • <i>Abhyanga</i> is included in the <i>Dinacharya</i>/Daily routine. • <i>Abhyanga</i> can be taken as the main treatment for many medical conditions. 	<ul style="list-style-type: none"> • Massage can’t be use as prior therapy for <i>Panchakarma</i>. • Massage need not be taken as part of daily routine. • Massage cannot be taken as main treatment it is always supplementary.
Indication	<ul style="list-style-type: none"> • Healthy baby for proper growth and development. • Many neuromuscular disorders. 	<ul style="list-style-type: none"> • Healthy baby • Neuromuscular disorders with some physiotherapy practices.
Contra indications	<ul style="list-style-type: none"> • Person suffering with the <i>Kapha Dosha</i> diseases. • After the <i>Panchakarma</i> • Person suffering from <i>Ajeerna</i> (Indigestion) 	<ul style="list-style-type: none"> • Inflammatory conditions • Severe body aches • Sprains and strains • Fractures • Dislocations

CONCLUSION

Ayurveda newborn care protocols are very scientific; researchers of present era prove the scientific background of all these procedures. *Abhyanga* (Massage) is one of this protocols and very effective to gain weight, reduces pain, enhances immunity and accelerates the healthy growth and development of baby. With proper selection of oil and with certain precaution under medical supervision and advice one can practice *Abhyanga* from birth to infantile age without any harm is the key massage to modern health world.

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