



Abhyanga in Neonatal Care: An Integrative review

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Abstract: The neonatal period represents a highly sensitive and decisive phase of human life, requiring organized, gentle, and evidence-based care. Ayurveda describes a systematic approach to newborn care known as Jatamatra Paricharya, which outlines essential protocols for promoting neonatal health. Abhyanga is an integral component of this regimen. The practice of neonatal massage using lubricants is prevalent worldwide and closely resembles the Ayurvedic concept of Abhyanga.

In clinically stable neonates, Abhyanga can be safely performed with appropriate caution, taking into account specific indications and contraindications. Abhyanga contributes to improved strength, nourishment, and skin health, and supports optimal growth and development in newborns. Reported benefits include enhanced weight gain, reduction in pain and stress, improved alertness, decreased depressive behavior, and improved immune responses, including increased natural killer cell activity.

While performing Abhyanga, harmful traditional practices and social taboos such as forceful stretching of limbs or manipulation of ear and nasal cartilages should be strictly avoided. The selection of oil should be individualized, considering the infant's constitution and local climatic conditions. Among various Ayurvedic oil formulations, Bala Taila is regarded as one of the most suitable oils for neonatal Abhyanga.

Although Abhyanga is often categorized as a complementary or traditional therapy, it holds significant potential in promoting neonatal health and supporting modern healthcare practices. This article presents a systematic review aiming to highlight the relevance and contribution of Ayurvedic newborn care protocols in enhancing neonatal health, thereby offering valuable insights to contemporary healthcare systems.

Index Terms - Abhyanga, Jatamatra Paricharya, Neonate, Ayurveda, Newborn Care.

I. INTRODUCTION

The neonatal period represents one of the most vulnerable and crucial phases of human life, as it lays the foundation for future growth, development, and overall health. Appropriate care during this phase plays a decisive role in ensuring survival, optimal physiological adaptation, and long-term well-being. Hence, neonatal care has been an integral part of healthcare practices across civilizations since ancient times. Diverse newborn-rearing practices have evolved globally, influenced by geographical location, climatic conditions, cultural beliefs, and gradual refinement over generations.

In India, traditional newborn care practices continue to be followed even today, many of which are deeply rooted in the ancient Ayurvedic system of medicine. Ayurveda provides a well-structured and sequential approach to neonatal care known as Jatamatra Paricharya, which is designed to facilitate the smooth physiological transition of the newborn from intrauterine to extrauterine life. These practices are not merely ritualistic but are based on sound principles aimed at promoting physical strength, neurological development, and overall vitality of the neonate.

Among the various procedures described, oleation therapies occupy an important place. Different methods of oil application are mentioned in Ayurvedic texts, such as Parisheka, Samvahana, Abhyanga, and Mardana. Parisheka, which involves the gentle sprinkling of oil, is primarily advised immediately after birth to alleviate stress experienced during labor and to pacify aggravated Vata Dosha. Samvahana refers to the gentle smearing of oil over the body, while Abhyanga involves systematic application of oil with gentle to moderate pressure in specific directions^{1,2}. Mardana

Although Abhyanga is not explicitly listed as a mandatory procedure under Jatamatra Paricharya, its benefits in maintaining health, preventing degeneration, reducing stress, and nourishing body tissues are well recognized in Ayurveda. Therefore, incorporating Abhyanga in neonatal care is considered highly beneficial for promoting healthy growth and neurodevelopment.

In contemporary practice, neonatal massage is widely used in various parts of the world and bears resemblance to Abhyanga. However, differences exist in technique, intent, and philosophical basis. Massage, as defined in modern literature, involves rubbing or kneading of the skin to stimulate or relax the body⁴. While massage can be both stimulating and calming, its application in neonates requires careful consideration of the infant's developmental readiness. Gentle touch and appropriate timing are essential to avoid physiological or behavioral instability. Teaching caregivers the correct method of handling and massaging the infant is therefore crucial for ensuring safety and maximizing therapeutic benefits⁵.

II. 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 care five years..

III. MATERIAL AND METHODS

References from the different kinds of journals, articles, papers, and websites. Research papers, dissertations and theses from different institutions. Reference and textbooks on pediatrics and neonatology, Ayurveda Samhitas and related texts, newspapers, and other electronic media.

ABHYANGA IN NEONATAL CARE: CONCEPT, PROCEDURE, AND PRECAUTIONS

In Ayurveda, Abhyanga is described as an essential component of daily health practices (Dinacharya)⁶ for maintaining physical strength and promoting longevity in healthy individuals. In Indian tradition, this practice is also widely followed for newborns as a routine caregiving measure. Classical Ayurvedic texts emphasize Abhyanga for delaying the aging process and sustaining a healthy life. However, the method of application is not uniform and requires modification based on geographical location, seasonal variations, and climatic conditions. For instance, in colder environments, oil used for Abhyanga should be slightly warmed, whereas in hotter climates, oil may be used at room temperature.

The selection of oil also varies according to health status. While different medicated oils are indicated for specific disease conditions, sesame oil (Tila Taila) is considered the most suitable for healthy individuals due to its nourishing, strengthening, and versatile properties. For neonates, sesame oil processed with medicinal Dravya is regarded as superior. Oils such as Bala Taila, Lakshadi Taila, Ashwagandhadi Taila, and Balaashwagandhadi Taila are traditionally employed, among which Bala Taila is considered particularly beneficial for neonatal Abhyanga.⁷

ROLE OF ABHYANGA IN NEONATAL CARE

Abhyanga constitutes a fundamental component of neonatal care practices and is performed across cultures for various reasons. Globally, newborn oil massage is motivated by cultural, familial, and traditional beliefs and is commonly associated with the following objectives:

1. Promotion of health and protection.
2. Enhancement of emotional well-being.
3. Improvement of skin appearance and physical development.

METHOD OF PERFORMING ABHYANGA AND PRECAUTIONS

The technique of Abhyanga varies across regions and communities. Even within India, significant differences exist in the oils used, pressure applied, and methods followed. For example, in northern India, mustard oil is commonly used, and massage is often performed by elderly women with traditional experience. In contrast, southern regions frequently use coconut oil and incorporate specific pressure points during massage.

Although neonatal Abhyanga offers multiple benefits, certain traditional practices have been identified as potentially harmful. These include forceful stretching of limbs, pulling of ears or nasal cartilage, squeezing of breast nodules, slapping the back, excessive abdominal pressure, exaggerated flexion or extension of joints, and crossing of limbs during massage. Such practices may result in adverse outcomes, including choking, cyanosis, joint dislocations, fractures, neurogenic shock, mastitis, severe pain, and long-term alterations in pain perception. Therefore, proper technique and gentle handling are crucial to ensure safety and therapeutic benefit.

GENERAL PRECAUTIONS DURING NEONATAL ABHYANGA

The following precautions should be strictly observed while performing Abhyanga in newborns:

- The procedure should be initiated only after obtaining medical advice.
- Abhyanga must be carried out under appropriate medical supervision.
- Care should be taken to protect the umbilical stump and umbilical region.
- Adequate healing should be ensured after the separation of the umbilical cord.
- Excessive or insufficient pressure during massage should be avoided.
- Oils causing hypersensitivity reactions such as erythema, rashes, or pustules should not be used.

EFFECTS ON DHATU

Dalhana the commentator of Susruta has described the effect of Abhyanga. According to the duration of Abhyanga done, the oil used in Abhyanga reaches;⁸

1. Root of hair of the skin - 300 Matras (96 sec.)
2. Twacha - 400 Matras (133 sec.)
3. Rakta - 500 Matras (160 sec.)
4. Mamsa - 600 Matras (190 sec.)
5. Meda - 700 Matras (228 sec.)

6. Asthi - 800 Matras (240 sec.)
7. Majja - 900 Matras (285 sec.)

Abhyanga should be applied for at least 5 to 10 minutes continuously to get its maximum effect in deeper tissues like Majja. Therefore, as a daily routine, 10 minutes is sufficient, but for a diseased condition, 30 to 60 min of Abhyanga is needed. In diseased persons, medicated oils are preferred for curing the conditions. By Abhyanga, the nervous system gets stimulated, thus providing stimulation to the muscular system, vessels, and glands governed by the particular nerve, and keeps the human body healthy. Massaging also improves the circulatory system, thus reducing the pain. Usually, lukewarm medicated oil should be used for massaging. The warm oil stimulates the Swedavaha Srotas (perspiring body channels), thus causing dilatation of the blood vessels, thereby increasing the blood circulation, thus relieving pain, stiffness, and contraction of vessels. Screening the blood supply and nerve supply of skin, it's very clear that the skin has a network of blood supply. The human body has 107 Marma (vital points).⁹ In Marmas, the Prana (energy) resides. By doing massage, the vital points get stimulated and produce positive energy, thereby protecting, rejuvenating, and increasing the immunity towards environmental changes. It is scientifically proven that massage increases the production of white blood corpuscles and antibodies, which provide more resistance against diseases. The soles of the feet are said to have Marma points, which in turn stimulate the Indriyas (sense organs). Therefore massage is very important to lead a healthy life and to create a healthy society.

BENEFITS OF ABHYANGA IN NEWBORNS

Classical Ayurvedic literature attributes several benefits to Abhyanga, including prevention of tissue degeneration, relief from pain, fatigue, and exhaustion, enhancement of sensory organ function, nourishment of body tissues, improvement of skin texture, increased strength¹⁰, and promotion of longevity. These benefits are especially significant in the neonatal period due to the following reasons:

- a. The newborn undergoes considerable physical stress, fatigue, and discomfort during passage through the birth canal.
- b. Neonatal skin is extremely delicate and requires special care compared to adult skin.
- c. The neonatal period is marked by rapid growth velocity, demanding continuous nourishment.
- d. This phase is critical for the maturation of the central nervous system and sensory organs.

Thus, Abhyanga plays an essential role in supporting healthy growth and neurodevelopment in newborns.

Abhyanga (therapeutic oil massage) exerts significant physiological and neurodevelopmental benefits through stimulation of pressure receptors and activation of the vagus nerve. Scientific evidence demonstrates that massage therapy increases vagal activity,¹¹ a key regulator of autonomic nervous system function, which in turn mediates growth, digestion, emotional regulation, and neurodevelopment.

Abhyanga has been shown to significantly improve weight gain, particularly in preterm infants. Massage increases vagal tone, which enhances gastric motility and digestive hormone release (insulin, gastrin), leading to improved nutrient absorption and growth without increased caloric intake.

1. ENHANCED WEIGHT GAIN AND GROWTH

Infant massage has been consistently associated with significantly greater weight gain in both preterm and low-birth-weight neonates when compared with standard care. A randomized trial in stable very low birth weight preterm infants reported that those receiving moderate-pressure massage gained an average of ~63 g/day more than controls and reached full feeding earlier.¹²⁻¹³

2. IMPROVED FEEDING TOLERANCE AND REDUCED HOSPITAL STAY

Massage therapy has been associated with faster achievement of full enteral feeding and subsequently earlier discharge from the hospital. In addition to enhanced weight gain, infants receiving massage achieved oral feeding milestones more rapidly than the control groups.¹⁴

3. PAIN MODULATION AND STRESS REDUCTION

Several clinical studies and systematic reviews indicate that infant massage can reduce pain responses during routine procedures (like heel stick), suggesting analgesic and stress-modulating effects of tactile stimulation. Neurodevelopmental and Behavioral Benefits.¹⁵

4. ENHANCED BOWEL MOVEMENTS AND REDUCED JAUNDICE

Infant massage has been shown to increase defecation frequency and lower bilirubin levels in jaundiced neonates undergoing phototherapy. Increased bowel movements help eliminate bilirubin, contributing to reduction of jaundice.¹⁶

5. NEUROBEHAVIORAL AND DEVELOPMENTAL OUTCOMES

Massage may improve behavioral responses, sleep patterns, and early developmental indicators in infants. Some studies in term newborns suggest enhanced length and trends toward improved sleep, though evidence on long-term neurodevelopment remains limited or uncertain.¹⁷

6. PARENT-INFANT BONDING AND PARENTAL STRESS

Infant massage has been linked with reduced parental stress and improved parent-baby interaction. A randomized controlled trial in premature infants found lower parental distress scores in the massage group compared with the control.¹⁸

According to Charaka¹⁹

Regular Abhyanga helps to avoid Abhigata caused by Abhigata or heavy works it will not affect skin complexion. It makes the skin Susparsha, well-grown body, Balavana (good strength), Priyadarshana (pleasing appearance), and Alpajara (signs of ageing develop slowly).

According to Susruta²⁰

It helps Mardhavakara (softness of body), Pacifies Kapha and Vata, Dhatu Pushti (promotes Dhatu), Provides Mruja (cleanliness), Varna (complexion) and Balaprada (strength).

INITIATION AND TIMING OF ABHYANGA

From a neonatal care perspective, Abhyanga may be initiated soon after birth once the newborn achieves physiological stability. Thereafter, it may be performed once daily, preferably in the morning or evening, in healthy and vitally stable neonates. If Abhyanga is not started immediately after birth, it may still be initiated later, provided the newborn is clinically stable and does not exhibit signs of illness such as lethargy, refusal to feed, convulsions, or respiratory distress.

Morning hours are considered ideal for performing Abhyanga. It is essential to maintain a room temperature of at least 25°C to prevent hypothermia.²¹ Warmers or room heaters may be used; however, exposure to smoke or combustion products such as coal, kerosene, or organic fuels must be strictly avoided due to their harmful effects on neonatal lungs. Adequate ventilation without air drafts should be ensured.

DURATION AND CONTINUATION

In the absence of illness, Abhyanga may be continued daily throughout infancy, up to one year of age.

SELECTION OF OIL FOR NEONATAL ABHYANGA

The use of oil provides a smooth, friction-free surface, making tactile stimulation more acceptable to the newborn. From an Ayurvedic standpoint, sesame oil is considered the best among vegetable oils. When sesame oil is processed with herbal decoctions, milk, minerals, or other medicinal substances, it is referred to as Siddha Taila. Bala Taila²² is one such medicated oil commonly recommended for neonates. It is known to enhance tissue nourishment, improve strength, and aid in the prevention of hypothermia.

INDICATIONS AND CONTRAINDICATIONS

Abhyanga is a safe and beneficial procedure for all vitally stable newborns. However, it should be avoided under certain conditions. These are :

- Immediately after feeding
- Neonatal hypoglycemia
- Sick neonates with lethargy, refusal to feed, or signs of sepsis
- Congenital heart diseases, especially cyanotic heart conditions
- Vitally unstable neonates
- Neonates requiring oxygen support due to respiratory distress
- Severe or exaggerated neonatal jaundice

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 sessions²³. 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 the 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 phases, 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.¹⁵ This light-pressure massage is like Samvahana, while moderate-pressure massage resembles that of Abhyanga.

IV. DISCUSSION

Newborn care constitutes one of the most essential components of basic healthcare, as the neonatal period represents a phase of rapid physiological adaptation and vulnerability. Massage therapy has been practiced universally across cultures, both in ancient times and in contemporary settings, as a fundamental element of newborn care. In classical Ayurvedic literature, neonatal care is systematically described under Jatamatra Paricharya, which includes procedures such as Abhyanga, Snana, Jatakarma, and other supportive measures aimed at ensuring healthy growth and development of the newborn.

Abhyanga, in particular, is a time-honored practice transmitted through generations and remains deeply embedded in traditional childcare practices. Ayurveda emphasizes Abhyanga as a preventive and promotive intervention, especially during the neonatal period, which is considered Vata-pradhana. Since Vata Dosha governs movement, neurological functions, and growth, its regulation through Abhyanga plays a crucial role in minimizing neonatal morbidity and supporting physiological stability.

Tactile stimulation through Abhyanga helps in the development of the infant's earliest sensory language—touch—which forms the foundation for neurobehavioral organization and emotional security. Regular oil massage improves digestion by enhancing vagal nerve activity, which in turn increases gastric motility, digestive hormone secretion, and nutrient absorption. This

mechanism explains the improved weight gain and growth observed in both term and preterm infants receiving regular massage therapy.

Abhyanga also contributes to the development of healthy muscle tone, improved circulation, and enhanced tissue nourishment, supporting overall physical growth and neuromuscular maturation. The increase in vagal activity further promotes relaxation, leading to improved sleep patterns, longer duration of quiet sleep, and better behavioral state regulation in newborns. Adequate sleep during infancy is critical for brain development and emotional regulation.

From an Ayurvedic perspective, the benefits of Abhyanga are described as Mrijapada (cleansing of the body), Varnaprada (improvement in skin complexion), Balaprada (enhancement of physical strength), Swapnakara (induction of sound sleep), and Ayushyakara (promotion of longevity). These classical descriptions find support in modern scientific observations, where massage therapy has been shown to improve skin integrity, reduce stress hormone levels, enhance immune function, and promote both mental and physical well-being.

Additionally, the application of oil during Abhyanga improves skin barrier function, reduces transepidermal water loss, and aids in thermoregulation—an especially important factor in neonates who are prone to hypothermia. The calming and stress-reducing effects of massage also contribute to improved autonomic balance and psychosocial bonding between the infant and caregiver.

Abhyanga represents a holistic neonatal care intervention that integrates physical, neurological, emotional, and immunological benefits, reinforcing its relevance in both traditional and modern healthcare systems.

Due to Abhyanga skin becomes soft, beautiful and increases mental and physical strength and reduces stress.²⁴

IV. CONCLUSION

Abhyanga is an important and effective neonatal care protocol that significantly contributes to the growth, development, and overall well-being of the newborn. By stimulating the autonomic and central nervous systems, Abhyanga promotes physiological stability, improves digestive function, enhances weight gain—particularly in preterm infants—and supports optimal neurodevelopment.

Regular Abhyanga plays a vital role in thermal regulation, prevention of hypothermia, maintenance of blood circulation, reduction of pain and stress, and enhancement of immune function. When performed using appropriate techniques, suitable oils, and with proper precautions, Abhyanga is a safe, non-invasive, and cost-effective intervention that can be practiced from birth through infancy without adverse effects.

In the context of rising neonatal morbidity and the need for holistic, family-centered care, Abhyanga serves as a valuable complementary therapy that bridges traditional Ayurvedic wisdom with contemporary neonatal science. Therefore, Abhyanga should be encouraged and promoted as an integral component of neonatal care to support healthy survival, growth, and long-term developmental outcomes.

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