

## Emollient use among infants attending follow-up clinic in a tertiary care hospital in eastern India

Dr Arijit Das

MD (Pediatrics)

Associate Professor, Department of Pediatrics, College of Medicine & JNM Hospital, Kalyani, Nadia, India

Contribution: conception, planning, data collection, interpretation, literature review, manuscript preparation,

Dr Ritesh Singh

MD (Community Medicine)

Associate Professor, Department of Community and Family Medicine, All India Institute of Medical Sciences,

Kalyani, Nadia, West Bengal, India

Contribution: review.

Corresponding Author: Dr Arijit Das

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### Abstract:

**Introduction:** Infant massage has been a traditional practice in India [1]. But, this has also been a less studied area as well [1]. In addition to that, various emollients has been used for infant massage traditionally. While many of them are beneficial for the neonatal or infantile skin, some have been proved to be detrimental for the same.

**Methods:** The study was conducted among infants and neonates attending the follow-up clinic of a tertiary care teaching hospital. A semi-structured pre-tested interview schedule was developed. The clearance from the institutional ethics committee was taken before the enrolment of participants for the study. **Results:** A total of 282 infants were enrolled for the study. Out of 282 patients 72 were preterm (25.53%) and 210 (74.46%) were term. 60 infants had history of IUGR. Among 282 patients 104 (36.87%) patients were found to use some form of emollient, while 178 infants (63.12%) did not use any emollients. Among all 104 patients using emollients for massage, 68 (65.38%) were male and 36 (34.61%) were female. 14 (13.46%) preterm and 90 (86.53) term babies were using any emollient.

**Conclusion:** Although, oil massage of newborn infants has been practiced routinely for generations throughout the sub-continent and the Mediterranean region [9-15], the current study suggests, there has been lacune in both knowledge and practice among the community and the health care workers as well.

**Key Words:** emollient use, infant massage, Mustard oil, preterm.

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Date of Submission: 13-09-2021

Date of Acceptance: 29-09-2021

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### I. Introduction:

Infant massage has been a traditional practice in India [1]. But, this has also been a less studied area as well [1]. In addition to that, various emollients has been used for infant massage traditionally. While many of them are beneficial for the neonatal or infantile skin, some have been proved to be detrimental for the same. Moreover, recent studies have also shown that, use of emollients increase the skin barrier and protect against infection in neonates and infants, improves weight gain and decrease mortality and morbidity, particularly, in preterm infants[2]. Emollient therapy has been proven to be potentially promising intervention for use in low resource settings [2]. In this context, the present study strives to study the prevalence of infant massage among the infants attending the follow-up Clinic in a tertiary care hospital setting. The study also focuses on the types of emollients used among the infants and neonates.

Skin is the largest organ of the body with several vital functions such as barrier integrity, thermoregulation, immunological function, protection from invasion by microbes and ultraviolet rays. It has been observed that skin in new born undergoes various structural and functional changes from birth to first five years of life [3,4]. Thus, skin care in newborn and infants is a very vital yet often neglected area of interest. Several studies also highlighted the fact that infant massage is a traditional practice in the Sub-continent, but remains less studied. Thus our present study strives to get a glimpse at the present practice of emollient use among newborns and infants attending the follow up clinic in this institute. The objective of the study was to find out the prevalence of the practice and type of emollients used in pediatric population.

## II. Method:

The study was conducted among infants and neonates attending the follow-up clinic of a tertiary care teaching hospital. A semi-structured pre-tested interview schedule was developed. The clearance from the institutional ethics committee was taken before the enrolment of participants for the study. The interview schedulesought the necessary information from the care-giver attending the follow-up clinic with the infants and neonates. The questionnaire was administered by the medical officers attending the follow-up clinic. Data was collected for a period of 6 months. After data collection, data was compiledon the Microsoft excel software. Subsequently, the data was analysed and tabulated.

## III. Results:

A total of 282 infants were enrolled for the study. Out of 282 patients 72 were preterm (25.53%) and 210 (74.46%) were term. 60 infants had history of IUGR. Among 282 patients 104 (36.87%) patients were found to use some form of emollient, while 178 infants (63.12%) did not use any emollients.

Among all 104 patients using emollients for massage, 68(65.38%)were male and 36 (34.61%) were female. 14(13.46%) preterm and 90 (86.53) term babies were using any emollient.

Type of emollient used also varied among the participants. The study showed 40 children(38.46%) used mustard oil for oil massage, while 34 patients (32.69%) used some form of proprietary oil formulas for oil massage. Coconut oil was used in 10 (9.61%) infants. Rest of the study participants used olive oil(6,5.76%), cream (8, 7.69%), Lotion (2, 1.92%) or a varied combinations of these (4,3.84%), (Table 1.1).

Name	Frequency	percentage
Mustard Oil	40	38.46
Proprietary Oil formulations	34	32.69
Coconut oil	10	9.61
Olive oil	6	5.76
Cream	8	7.69
Lotion	2	1.92
Combinations	4	3.84

In most of the babies, emollients were used as oil massage prior to bath (76,73.07%). In 24(23.07%) babies emollients were used post bath as oil massage. In two babies oil massage was used more than or equal to thrice per day.

Emollients were started in 1<sup>st</sup> week in 16 (15.38%) babies, whereas, oil massage started in the first month in the majority of babies (52,50%). Majority of the babies were started oil massage on advised from the elderly family members or neighbours, most commonly grandparents (40,38.46%), whereas, in 32 infants the parents started emollient use on their own (30.76%). Emollient use was advised in 18 infants by a physician (17.30%).

Notably , in 12 patients, emollient use was stopped due to appearance of skin rash. Out of these 12 patients, 6 patients were on mustard oil massage and 6 were using proprietary oil formulas.

## IV. Discussion:

Skin is the largest organ in the body with vital functions. Skin care in children, especially in newborn and infants, is not given due attention that is required [5]. This fact is also evident in this current study results as only 36% babies are used some form of emollients. It has also been shown in several studies from different countries from the subcontinent and Africa that, mortality and morbidity among preterm neonates can be to some extent prevented by use of emollients for massage [2,5,6,7,8], particularly in the resource poor settings. Despite this, the current study identifies that less than 20% of preterm babies attending the follow up clinic (7 out of 36 preterm babies attending the follow up clinic)used emollients. While other previous studies have showed a high prevalence of oil massage among infants in India and the sub-continent [1-4], the current study, however, fails to establish that, as, only 36.87% of the infants used emollient massage. In the majority of the cases, emollient use was advised by a senior member of the family (grandparents, 38.46%) or parents started emollient use on their own (30.76%). This shows a high level of awareness among the community about benefits of emollient massage, but less so in case of preterm babies. The advice for emollient use came from the physician in only 18 cases (17.30%). This may suggest an underlying KAP gap among the health workers about

benefits of emollient use in infants, particularly the preterm infants. The study also shows that, in majority the of babies mustard oil was used as emollients (38.46%) as has been the cultural practice in different states from western India [1], despite different guidelines suggesting in contrary [5].

This may again suggest a knowledge gap at the community level and also within the health workers. Proprietary oil massage formulas were the second most commonly emollients (32.69%) to be used in the current study. This may be due to the pressure of advertising in different media forms.

Oil massage was started within the first month in majority of the babies (65.38%) and oil massage was started within the first week in 15.38% cases. However, in 34.61% babies, emollient use started after the first 3 months of life.

## V. Conclusion:

Although, oil massage of newborn infants has been practiced routinely for generations throughout the sub-continent and the Mediterranean region [9-15], the current study suggests, there has been lacune in both knowledge and practice among the community and the health care workers as well. Appropriate measures needs to be taken to bridge this gap for instituting proper skin care practice among newborns and infants and in the preterm neonates in particular. However, a larger study which may be generalised is required to find out the actual use of emollients in children.

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Dr Arijit Das, et. al. "Emollient use among infants attending follow-up clinic in a tertiary care hospital in eastern India." *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 20(09), 2021, pp. 04-06.