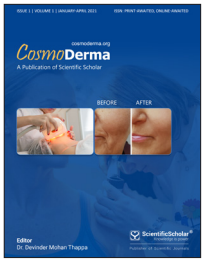
ScientificScholar®
Knowledge is power
Publisher of Scientific Journals

www.cosmoderma.org

CosmoDerma



Editorial

Baby wet wipes – Safety issues

Devinder Mohan Thappa[1]

[1]Department of Dermatology and Sexually Transmitted Diseases, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry, India.

***Corresponding author:**
Devinder Mohan Thappa, Department of Dermatology and Sexually Transmitted Diseases, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry, India.

dmthappa@gmail.com

Received: 26 July 2024
Accepted: 26 July 2024
Published: 13 August 2024

DOI
10.25259/CSDM_125_2024

Quick Response Code:

Taking care of newborn skin is necessary to avoid skin infections. The average daily exposure to external factors affects the skin negatively. Skin hygiene, proper skin cleansing, and protection of the infant skin barrier are essential to maintain barrier function and overall infant health. Few reports have been published evaluating infant tolerance of commercial wipes, but few studies suggest no skin injury or irritation with these products. The safest cleansing products for term neonates are mild, neutral pH cleansers without added dyes or fragrances.

Baby wet wipes are generally safe to use and do not appear to affect an infant's skin barrier integrity. Therefore, it is sensible to use cleansers specially designed for baby's skin, which are pH neutral and very mild to avoid irritants and allergic dermatitis. The skin of newborns is classified as sensitive, with a higher risk of skin barrier disruption and irritation of a diapered area. Despite dermatologist recommendations to use only water and a cloth for cleaning, most of the population still relies on the comforts of modern parenting, which includes intensive daily usage of baby wet wipes. Novel baby formulations are designed following the concept of infant skin health. They contain a gentle cleanser, suitable emollient, and buffer system, enabling a slightly acidic pH value. They are free of ethyl alcohol.

Baby wet wipes are disposable clothes used daily as a personal cleaning medium. The first skin cleansing product was introduced in 1957 by the Nice-Pak company. The first wipe solutions for baby skin were launched by Procter and Gamble in the late 1960s. Over the past decades, the wet tissue market has continued to rise as one of the fastest-growing worldwide. Commercially available baby wipes contain diverse combinations of compounds directly responsible for adverse skin reactions.

Baby wet wipes comprise a solid base sheet, a liquid formulation used for soaking the solid material, and a suitable package to seal it. The base sheet material generally originates from polyester or viscose fiber, a polyester/viscose combination, or cotton fiber. The most common, regular liquid formulation includes a big moiety of water. The primary packaging function is to retain the water in the base sheet for a certain period with an expiry date. Liquid formulations used for soaking wet wipes generally contain surfactants, preservatives, a suitable buffer system, emollients, emulsifiers, viscosity components, humectants, and skin conditioning agents. Fragrances have been added since ancient times and can be naturally derived from plants or synthesized in laboratories. They are the most frequent cause of contact allergy to cosmetics.

The choice of an ideal baby wet wipe depends on multiple factors, such as the chemical content of the liquid phase, the fabric, the scent, and, eventually, the packaging, followed by its biodegradability and environmental impact. A few common ingredients reported to trigger an epidemic of skin allergy are methylisothiazolinone/methylchloroisothiazolinone, parabens,

benzoic acid/sodium benzoate, phenoxyethanol, etc. It is better to perform a patch test on a small area to observe potential allergic reactions or sensitivity. An epidemic of exogenous skin pigmentation caused by baby wipes having ascorbic acid was observed in Italy. Several babies were referred to pediatricians or dermatologists for the sudden appearance of asymptomatic "mysterious" skin pigmentation. In all cases, clinical examination showed bizarre yellow-brownish areas with more or less defined borders without any sign or symptom of inflammation. Accurate history revealed that the pigmentation was associated with using a specific baby wipes brand, widely available in supermarkets. However, commercially available baby tissues contain diverse combinations of hazardous chemicals directly responsible for adverse skin reactions (e.g., itchy rashes, eczema, and allergic contact dermatitis).

Earlier, baby wipes that contained alcohol, perfumes, and other irritating substances were often associated with the induction and exacerbation of diaper dermatitis. Nowadays, baby wipes containing a water-based, alcohol-free lotion on a nonwoven cloth-like substrate with a pH of 5.5 were found to have significantly lower rash scores in the intertriginous areas than water and cleansing materials. Baby wipes developed recently are more suitable for daily use on infant skin, even sensitive skin.

How to cite this article: Thappa DM. Baby wet wipes – safety issues. CosmoDerma. 2024;4:98. doi: 10.25259/CSDM_125_2024