The Use of a Comprehensive Skincare Product System on Neonatal Patients in a Children’s Hospital

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INTRODUCTION AND CLINICAL PROBLEM

Infants in a typical neonatal intensive care unit have cleansing needs that require frequent bathing/cleansing products. Dry skin in neonates can be an issue, primarily because neonatal skin is not fully developed. The perineal areas in infants may be particularly prone to skin damage, usually presenting as erythema of various degrees. Measures are usually taken to manage skin damage, in the form of barrier creams, and in severe cases, zinc oxide containing barrier creams. A prophylactic approach is hypothesized, so that erythema may be prevented or attenuated at the skin surface via the early use of moisturizing products that may also display some barrier properties.

METHODS

A convenience sample of 29 neonates, average weight 6.7 lbs, average gestational age 31.7 wks were studied for 14 days. Body and perineal areas were assessed and the following products applied based on erythema severity present: a micronutrient containing cleanser,* a micronutrient containing moisturizing cream** or either a micronutrient containing silicone / natural oil film-forming cream*** or a petrolatum based ointment barrier containing zinc oxide.†

Subject demographics:

29 Subjects Enrolled

• 17 Males, 12 Females
• 69% Hispanic, 24% Caucasian, 7% African American or Other
• Average Body Weight: 3.06 kg (6.7 lbs)
• Average Gestation (wks): 31.7
• Reason for Skin Treatment
  ± 79% Skin Surface Damage Management
  ± 21% Skin Surface Damage Reduction

BASELINE SKIN SCORES

• Average Skin Condition Score for the Perineal area (n=29)
  ♦ Erythema = 0.11
  ♦ Breakdown 1.00
  ♦ Skin Condition Score for the Whole Body (n=29)
  ♦ Dryness 1.17
  ♦ Erythema 1.07
  ♦ Breakdown 1.00

RESUM PT

No adverse events were reported from exposure of neonatal skin to any of the study products, consistent with previous observations. The perineal area of the majority of the subjects (90%) was appropriate for moisturizer use only at study initiation. A certain percentage (22%) of these subjects required further intervention with a micronutrient silicone blend film-forming cream, and every case (100%) of increased erythema was brought back to baseline values. This observation that a film-forming cream can provide a clinically satisfactory outcome in the majority of a neonatal sample population bears further research. High levels of erythema were reported in a minority (10%) of cases, which was managed with a petrolatum based ointment barrier containing zinc oxide but resolution of the high level of erythema was not achieved within the study period.

In terms of managing the dryness of skin on the body (outside the perineal area) the treatments provided to a majority of the subjects kept skin at normal baseline condition. In only a few cases was dryness an issue that required a change in treatment. In all such cases where the film-forming cream was brought in, per the protocol, the patient still ended with the moisturizing cream, indicating that the skin condition was improved by the film-forming skin cream.

REFERENCES

3. Pediatric Skin Exposure Study. Phytoplex, Data on file, Medline Industries Inc.

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