

Cord and skin of a preterm neonate

Slide No. 2: Introduction

- The skin of preterm neonate is immature in immediate postnatal life
- It can easily be damaged and thus prone to antimicrobial attack
- It is important to recognize potentially beneficial as well as harmful interventions, which can affect skin integrity to optimise the outcomes and reduce the chance of infections

Slide No. 3: Objectives of this webinar

In this webinar we will learn about–

- Cord care
- Role of vernix caseosa
- Role of Bathing
- Care of the nappy area
- Emollient application
- Care during application of adhesives

Slide No. 4: Cord care

- After clamping and cutting, the cord should be left dry in hospital settings and nothing should be applied over it
- if umbilical stump is soiled, wash with clean water and keep it dry

Slide No. 4: Role of vernix caseosa

- Vernix caseosa is a natural lipid rich substance adhered to skin at the time of birth.
- It prevents transepidermal water loss, helps in temperature regulation and might play a role in innate immunity
- Vernix is shed automatically from the skin in first 24 to 48 hours
- As it is snugly adhered to skin, any attempt to remove vernix might cause damage to superficial layer of the skin
- Therefore no attempt should be done to remove vernix from skin

Slide No. 5: Bathing

- Bathing is routine cleaning activity in newborns.

- The initial bath in stable full term neonates can be given once the temperature is stabilized. However bathing in hospital/facilities increases risk of infection. Therefore bathing should be avoided in the SNCU/ hospitals.
- In low birth weight and premature neonates the bathing is delayed until cord is fallen off. Such baby should be sponged everyday with lukewarm water.
- Soaps and cleansers should be avoided in first few weeks of life

Slide No. 6: care of diaper area

- Diaper area is moist and prone to maceration. Moreover it is frequently exposed to microorganisms.
- The nappy should be having good absorbent properties. Mother's should be advised to frequently change nappies.
- The skin should be dried and aired between nappy changes
- Soiled diaper area should be cleaned with warm water and soft cotton cloth
- Nappy area should be wiped from front to back so as to prevent soiling of urinary orifices
- in presence of napkin rash, emollient like petrolatum jelly or zinc oxide containing pastes can be applied

Slide No. 7: Care of Scalp

- Routine use of shampoos for newborn skin is not indicated. However to remove crusts from scalp, Baby shampoos can be used. They should have minimal contact with the skin as the prolonged contact can cause irritant dermatitis
- The baby shampoos should be free from fragrance, anti-inflammatory agents. Hence avoid using medicated shampoos

Slide No. 8: Emollients for the skin

- In Indian scenario, vegetable oils (like Coconut oil, sunflower oil) are used for baby massage or emollient action. Mustard oil can cause contact dermatitis, hence it should be avoided in neonates
- Oil application decreases transepidermal water loss, improves weight gain. Hence might lead to reduction in hospital stay
- However oil application should be avoided in extremely low birth weight neonates in the first week of life

Slide No. 9: care during skin preparation during procedures

- While doing procedures, we should avoid excessive pressure during skin preparation
- For fixing temperature probes, IV cannula, feeding tubes,
 - A semipermeable dressing viz Tegaderm should be used as a base, over which further adhesives should be applied
 - Bulky dressings should be avoided as they cause skin damage during removal.

- To minimize skin trauma during removal of adhesives, they should be made wet by applying cotton balls soaked with warm sterile water for some time, so that they can be easily removed
- Use only gel electrodes for preterm neonates

Slide No. 10: Summary

To summarise, in this webinar we have learnt that-

- Cord should be kept dry, nothing should be applied to it
- Vernix caseosa should not be forcibly removed after the birth of the baby
- Bathing should be avoided in hospitals, sponging should be done instead
- Diaper area should be kept dry, wiped gently when soiled
- Coconut oil should be used in healthy low birth weight neonates, however should be avoided in the first week of life in ELBW neonates
- Semipermeable dressings should be used as a base and bulky dressings should be avoided.

Thank you