COPP MODULE

COMMON OFFICE PRACTICE PEDIATRIC PROBLEMS

[A MODULE OF IAP TAMILNADU STATE CHAPTER 2017]

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- **Publications**
  - Original article - Giridhar S, Kumar P, Attri SV, Dutta S. Intramuscular followed by oral vitamin A supplementation in low birth weight infants – A randomized controlled trial. Pediatric Research;18(2):331-335
  - Short report –Giridhar S, Kumar P, Kanojia KR. Jejunal evisceration during umbilical vein catheterization – an uncommon complication of a common procedure. Indian J Pediatr. 2012 Sep 27.
  - Brief report - Vijayasekaran D, Giridhar S, Gowrishankar NC, Nedunchelian K, Senguttuvan M. Pediatric interstitial lung disease. Indian Pediatr. 2006 Oct;43(10):899-903.
  - Case report - Giridhar S, Padmaraj R, Prabha S. Twins with senior-loken syndrome. Indian J Pediatr 2006;73(11):1041-43.
  - Review article - Giridhar S, Shanmughasundaram R. Ventricular Tap. J Neonatology 2006;20(3);286-87.
  - Review article - Giridhar S, Dutta S. Prostaglandins in Neonatal Practice. J Neonatology 2007;21(1);67-70.
  - Letter to the editor – Giridhar S, Venkataseshan S. Circuit for bubble CPAP. Indian Pediatr
- **Current Research Studies**
  - Efficacy of three different regimens of Vitamin K prophylaxis at birth for preterm very low birth weight infants
  - Performance of Salivary CRP as a rapid diagnostic test for neonatal sepsis
  - Assessment of skin integrity in neonates undergoing intensive care.

CARE OF NEWBORN SKIN

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Goals of Neonatal Skin Care

- Promote normal skin development
- Reduce traumatic injury
- Prevent dryness
- Avoid exposure to toxins

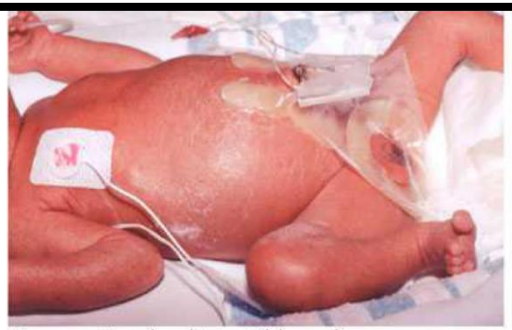
Assessment of newborn skin

Neonatal skin condition scale ***(AWHONN/NANN, 2001)***

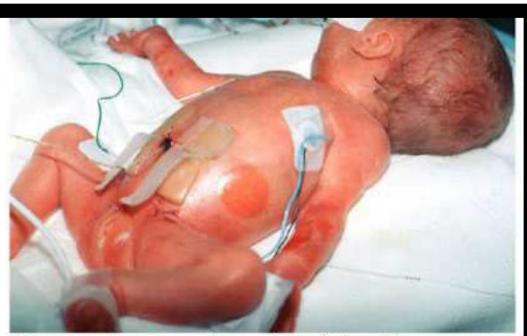
Criteria

- **Dryness**
  1 = Normal, no signs of dry skin
  2 = Dry skin with visible scaling
  3 = Very dry skin with cracking and/or fissures present
- **Erythema**
  1 = No evidence of erythema
  2 = Visible erythema (<50% body surface)
  3 = Visible erythema (>50% body surface)
- **Breakdown**
  1 = None evident
  2 = Small and/or localized areas
  3 = Extensive

A single score of 3 in one area or
a combined score of 6 and above is abnormal



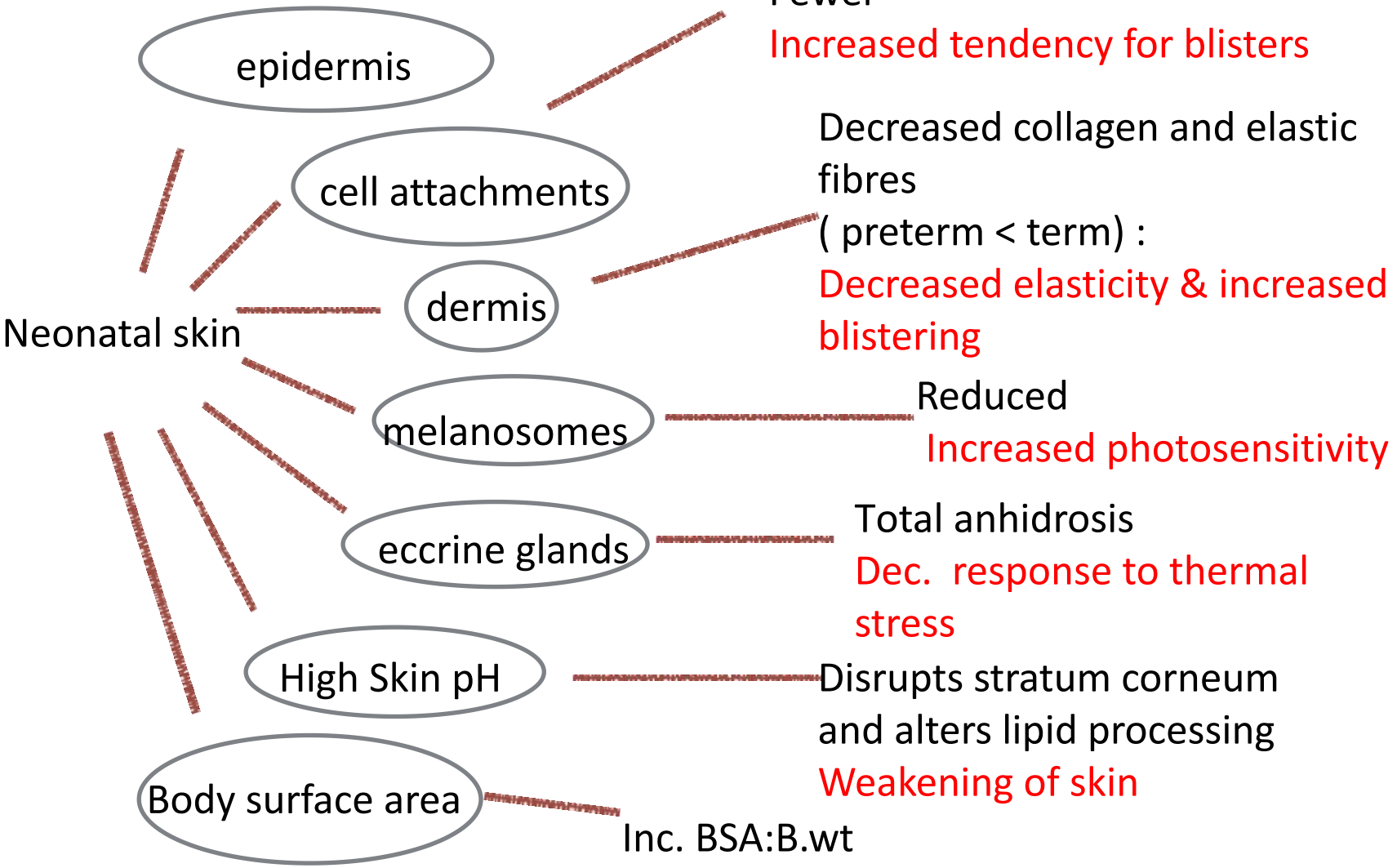
Dryness: 2 = dry skin, visible scaling
Erythema: 1 = no evidence erythema
Breakdown: 1 = none evident



Dryness: 1 = normal, no sign of dry skin
Eythema: 2 = visible erythema <50% body surface
Breakdown: 3 = extensive

Dryness: 2 = dry skin, visible scaling
Erythema: 3 = visible erythema >50% body surface
Breakdown: 3 = extensive

Neonatal skin peculiarities



Skin care in delivery room

- Immediately after birth, gently dry the infant with a clean dry pre-warmed, soft, cotton material. Towel not recommended
- If any blood or meconium – gently remove with clean sterile cloth
- Leave vernix as intact as possible and allow vernix to dry and peel naturally
- If at risk due to maternal blood borne pathogens (HIV, HBsAg) - then remove vernix also
- Wrap the infant to conserve heat and/or allow skin to skin contact with the mother

Bath - Newborns

- First bath - to be given when the baby is hemodynamically stable
- Bathing is to be done after cord separation
- If bathing is required earlier for cultural reasons, it is preferably on day 2 or 3 of life (not less than 6 hours). The umbilical area is to be covered. *(WHO recommendations on postnatal care of the mother and newborn, Oct 2013)*
- Keep it to short duration (approx. 5 -10 minutes) *
- Immersion tub bathing or traditional bath of baby on floor in between outstretched legs is preferred over sponge bath or cloth bath *(Bryanton, 2004)*
- Use lukewarm water (38 - 40°C)
- Bathing in the evening (pre – bedtime) helps to calm baby and improves sleep. **
- Preterm and LBW infants should not be bathed during hospital stay ***(****AWHONN/NANN, 2001)*

Bath-Newborns

Contd…

- Water depth should be deep enough to allow the infants shoulders to be well covered
- Initial bathing frequency is 2-3 times/week. Then with time, increase to daily bathing due to increased activity and dirt exposure.
- Maintain an adequately heated external environment, with an ideal room temperature of 26 - 27°C (close the doors to the room to minimise convective heat loss)
- Ensure all skin folds are dried thoroughly (armpits, groin, neck and behind the ears)

Skin cleansing agents

- Soaps, synthetic detergents and liquid cleansers are usually used
- Avoid alkaline soaps (increase skin pH, disrupt acid mantle)
- Avoid glycerine soaps (Excessive glycerine can absorb excess water out of the skin, potentially causing more dryness and irritation)
- Use only mild liquid cleansers or syndets (synthetic detergents)
- Antimicrobial soap is not recommended for use in neonates because of its harshness and potentially untoward effect on skin colonization

Scalp care

- The infant's scalp and hair should be cared for similarly, with the same gentle liquid cleansers
- If shampoos are used, they should have pH close to tears so that they are non-irritating to eyes
- They should be free from fragrance, harsh surfactants and anti-inflammatory agents.
- There are no published studies using shampoos in newborn population

Moisturizers / Emollients

- Routine application of emollients after bath, at least twice weekly, is recommended *
- If family history of atopy – Apply emollient daily after bath
- First sign of dryness, fissures or flaking - apply emollient twice daily
- The ideal emollient is relatively thick, pH neutral to slightly acidic, fragrance-free (no masking fragrances), dye free, relatively preservative free and very gentle
- Most proprietary emollients are creams (oil-in-water suspensions) or ointments (oily creams/water-in-oil)
- Avoid emollients containing sodium lauryl sulfate (harsh surfactant). **
- Creams are preferred over ointments in hot weather / conditions

Natural vegetable /Plant oils & mineral oils

- Can be added to water during bath as a cultural practice, or directly applied on skin
- Various oils used - mustard, safflower, sesame, coconut, olive, and soybean oils
- Most studied and safe - Coconut oil and safflower oil application *
- Avoid olive oil (damages the skin barrier) & mustard oil (increased contact dermatitis)
- Use oils with caution during hot weather as they cause increased occlusion of sweat pores in newborns and irritant folliculitis
- Avoid kitchen vegetable oils (sensitive to oxidation or light and are associated with variable levels of biologic activity). Use only pharmaceutical grade oils.
- Mineral oils are well studied, stable, non-comedogenic and unlikely to go rancid in hot climates & have excellent safety profile.

Umbilical cord care

- Cut cord at birth with a sterile blade or scissors using sterile gloves
- Later cord care
  - Hospital births - Clean dry cord care (no antiseptics)
  - Home births (in settings with high neonatal mortality ≥ 30 /1000 live births) - Daily **Chlorhexidine** application for 7 days (till cord separates). 2.5% chlorhexidine gel is available in India.
- Avoid application of traditional materials (e.g. ash, herbal or other vegetal poultices and human milk)
- If cord becomes soiled - clean with soap and sterile water & allow to air dry
- Identify early signs of omphalitis like oedema, tenderness, purulent or malodorous discharge & periumbilical erythema.

Nappy area care

- Nappy changes should occur frequently (at least 6 times a day) or whenever it is soiled or wet
- Avoid excessive scrubbing
- Achieve drying through air exposure or gentle patting with a dry towel or dry cotton.
- Skin cleanser may be used if stools are dry and difficult to remove
- The bottom should be wiped from front to back
- Baby wipes can be used from birth during every nappy change. *
- Wipes should contain pH buffers and should be free of irritants such as alcohol, fragrance, essential oils, soap, and harsh detergents (e.g., sodium lauryl sulfate); they should contain well-tolerated preservatives

Diapers

- Disposable diapers with absorbent gels are preferred over cloth nappies if affording. *
- Current disposable diapers are made from biologically inert polymers that have a long-standing and well-trusted safety profile, with no sensitizing dyes or latex.
- Even disposable diapers need frequent

  (≥ 6times/d) changing.

Barrier creams

- Barrier creams should be used on infants
  - at risk of perineal dermatitis at every nappy change
  - at the first sign of erythema or skin breakdown
- Use 20% zinc oxide creams or petrolatum extracts
- The removal of barrier creams between nappy changes is not necessary (unless soiled), rather apply another layer.
- Barrier creams containing plant extracts, white soft paraffin BP and/or fragrance should be avoided
- Avoid powders - block sweat duct pores leading to miliaria formation; accidental inhalation hazard

Other avoidable skin practices

- Avoid prickly heat powders (medicated)
- Some children get skin rashes with besan (gram flour) or malai (milk cream). In general, they are not recommended
- Avoid kajal application to eyes (lead toxicity)
- Do not squeeze breasts to express milk
- Avoid retracting foreskin of penis
- Do not use ear buds. Clean after bath with corner of towel or clean cloth
- Do not cleanse tongue and mouth

Thank you