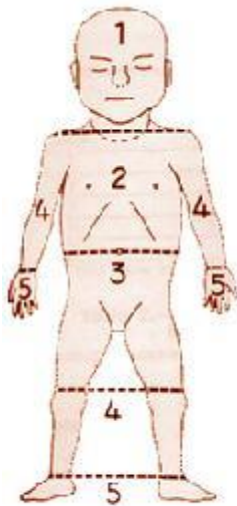


Assessing for Jaundice

Jaundice appears first in the face and progresses to the trunk and extremities. Blanching the baby's skin with a finger on their forehead or upper trunk and observing the underlying skin colour in bright and preferably natural light is a quick method of assessment. Observing the sclerae is also useful. Additional signs and symptoms of increasing jaundice include lethargy and poor feeding.

Kramers Rule



The bilirubin range associated with each zone is:

Zone	1	2	3	4	5
SBR (micromol/L)	100	150	200	250	>250

Is a quick non invasive method of assessing the degree of jaundice

Blanch the skin in each of the five zones shown above, observe the colour of the blanched skin (will be yellow if jaundiced) - it gives you an indication of what the bilirubin level may be

The zones show the natural progression of increasing jaundice levels

It should only be used as a guide, serum bilirubin levels should always be obtained

Kramer L.I., (1969), Advancement of Dermal Icterus in the Jaundiced Newborn, *Amer J Dis Child*, 118: 454-458.

Phototherapy Management

Phototherapy is an effective treatment for jaundice as the light energy changes the shape and structure of the unconjugated bilirubin so that it can be excreted. The rate of formation of the bilirubin photoproducts is dependent on the intensity and wavelengths of the light used and the amount of body surface area exposed to the light source.

Two different Natus units are available from Butterfly ward;

(1) the neoBLUE® mini LED phototherapy unit which can be mounted onto a radiant warmer or an incubator. This unit has a smaller effective surface area of light output. One unit may be appropriate for small premature babies, 2 units would be required for expanded coverage.

(2) the neoBLUE® LED phototherapy unit which is mounted on a roll stand and can be used with an incubator or radiant warmer – care must be taken to angle the light to the side of the radiant heat source so the heat source is not prevented from reaching the baby under a radiant warmer.

- Position phototherapy units no further than 12 inches (30.5 cm) from the baby as the lights have been calibrated to deliver their stated intensity at this distance. As both light units do not deliver significant amounts of ultraviolet or infrared radiation they can be used closer to the baby than this distance, as potential skin damage or fluid loss should not be a risk.
- As much of the skin surface as possible should be exposed to the phototherapy light; the aim is to increase the speed of bilirubin clearance above the rate at which the baby is producing bilirubin to achieve a reduction in TSB. To maximise skin exposure, dress the baby in a nappy and their protective eye covers only, re-position them regularly and avoid obstructing the light source reaching the baby. Consider the use of both LED phototherapy lights and a fibreoptic pad to expose more skin surface area.
- The fibreoptic pad phototherapy unit available on Butterfly is the GE Bilisoft LED Phototherapy System: this fibreoptic pad is designed to be placed within a disposable Bilisoft Cover and then positioned directly in contact with the baby's skin, underneath the baby. This pad does not generate heat and will not interfere with the neonate's thermal environment.
- There is a theoretical risk of retinal damage in animal model studies; all neonates receiving phototherapy should have their eyes covered with opaque eye covers e.g. Natus Biliband® Eye Protector, whenever phototherapy is administered. Care should be taken that the eye cover does not occlude the nares. Natus Biliband® Eye Protector is available in 3 sizes: Regular, Premature and Micro, the size of which is selected according to head circumference measure. Eye covers should be removed 4-6 hourly or during feeds/cuddles if clinically stable, or removed 4-6 hourly for ongoing eye care and monitoring of eyes for discharge/infection/damage.
http://www.natus.com/documents/051693H_Neoblue_in_service.pdf retrieved 07/04/15
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