

[NM-216] Modifying Monitors and the Management of a Pediatric Ichthyosis Patient

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Moderate to severe ichthyosis can present challenges. The modifications made to monitoring instruments and surgical dressings can provide lessons on how to manage any patient with easily damaged skin such as burn patients. Our medically challenging case involved a 5 year old 18 kg male with history of ichthyosis being seen for dental rehabilitation including multiple teeth extractions.

The anesthetic considerations for patients with ichthyosis include thermoregulation, elevated risk of dehydration and subsequent electrolyte disturbance, and patient's elevated risk of infection due to the difficulty of line placement as a result of hyperkeratosis. As a practical matter, however, the most acute issue is the protection of skin and eyes. In our patient's pre-operative consultation, his parents made many valuable suggestions including the use of preferred dressings such as Vigilon.

Preparation for the case one day prior to surgery involved the modification of monitors. We trimmed the neonatal EKG leads down to only the electronic probe and removal of adhesive bandage from the pulse-oximeter. All adhesives were removed by application of mineral oil on the EKG probes and the pulse-oximeter. The pulse-oximeter was wrapped with Tegaderm with adhesive side of the Tegaderm stuck to the probe leaving a plastic film that will contact the patient's skin. [Figure 1]

The pulse oximeter probe was wrapped around the patient's thumb, with gauze wrapped around the pulse-oximeter probe and Mepitac placed to secure the gauze wrapping. [Figure 2] For the EKG, Lacrilube was applied to the now non-adhesive EKG probes to serve as an electrically conductive gel. Vigilon was placed over the EKG probes and underneath the leads. To protect the patient's eyes, Lacrilube was placed in both eyes and gauze used to cover them. With these precautions in place, the case proceeded uneventfully, and the patient made a successful recovery with minimal damage to his skin.

Krug M, Oji V, Traupe H, Berneburg M. Ichthyoses – Part 2: Congenital ichthyoses. *JDDG: Journal der Deutschen Dermatologischen Gesellschaft* 2009; 7:577–587

Akiyama M, Sawamura D, Shimizu H. The clinical spectrum of nonbullous congenital ichthyosiform erythroderma and lamellar ichthyosis. *Clinical and Experimental Dermatology*. 2003; 28:235–24




