

Pediatric reconstructive surgery in extravasation injuries: Experience with dermal matrix

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Abstract

Extravasation injury is defined as the damage caused by the accidental leakage of intravenous solution from a vessel into surrounding tissues. Extravasation damage ranges from painful intravenous sites to soft tissue necrosis and even nerve damage and tendon rupture. The incidence in hospitalized adults has been reported up to 39%; while up to 70% of newborns in neonatal intensive care units suffer an extravasation incident. Because of their location--the hand and foot--and because most extravasations occur at night (and therefore often go unnoticed for many hours), the consequences of such events can be both functionally and aesthetically devastating, in particular in pediatric patients. Despite their grave consequences, no surgical treatment guidelines have been published to date.

In this article, we aim to address the surgical challenges posed by this problem and present our treatment algorithm for patients who present with full thickness tissue necrosis following extravasation. Here we also describe our own experience using early aggressive debridement followed by tissue coverage with a dermal skin substitute (Integra[®]) and a thin skin graft in an infant who suffered an extravasation injury of the dorsum of the hand. We were able to obtain adequate soft tissue coverage while preserving complete hand function. No complication was observed except for skin hyperpigmentation.

It is our opinion that these patients should be treated as burn patients and undergo early aggressive surgical excision of involved areas to limit untoward sequelae.

Biography

Socorro has completed her training in Plastic Surgery at ULB. Her fields of interest have always been burn patient and among them she developed a special devotion for pediatric burn patient, she has been always open to new technologies and materials to may offer the best for her patients.

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