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management of encephaloceles is challenging when massive brain herniation is present. In such instances, an expansile cranioplasty may be attempted so as to preserve some herniated brain tissue. Complications such as wound dehiscence, CSF leak and scalp necrosis are postoperative concerns. The treatment of scalp necrosis with dural and brain exposure is certainly a challenge, due to the complexity of flap techniques in such a young age. Herein we describe the use of a novel technique for the management of a scalp necrosis and dehiscence in an infant.

CASE DESCRIPTION: a patient with a giant parietal encephalocele and massive brain herniation underwent an expansile cranioplasty. A large scalp necrosis ensued as a complication, and later progressed to a suture dehiscence despite a new surgical intervention, with resultant brain exposure. A scalp reconstruction was subsequently performed using an artificial dermal substitute, laid directly onto the brain, followed by a split-thickness skin graft. We observed a rapid engraftment, without any further complications, with an acceptable cosmetic result in the long term follow-up.

CONCLUSION: A simple technique, such as the use of an artificial dermal matrix with simultaneous split-thickness skin graft may be an effective treatment for the repair of scalp defects, even when coverage of exposed brain tissue is needed, when no other techniques are found to be suitable [1)].

1)
Vilela MD, Pedrosa H, Sampaio F, Carneiro LJ. Matriderm® for the management of scalp necrosis following surgical treatment of a giant parietal encephalocele. Case report. World Neurosurg. 2017 Nov 1. pii: S1878-8750(17)31858-2. doi: 10.1016/j.wneu.2017.10.130. [Epub ahead of print] PubMed PMID: 29102755.