Treatment of deep second-degree burns on the abdomen, thighs, and genitalia treatment: use of tilapia skin as a xenograft

Tratamento de queimaduras de segundo grau profundo em abdômen, coxas e genitália: uso de pele de tilápia como um xenoenxerto

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Mr. Editor

I read with great interest the article "Treatment of deep second degree burns in the abdomen, thighs, and genitalia: use of tilapia skin as a xenograft," published in the *Revista Brasileira de Cirurgia Plástica*[1]. The article describes a clinical case of conservative treatment of a deep second-degree burn with biological dressing. Even aware that part of the collagen in the tilapia skin resides in the recipient bed[2], I would like the authors to comment on the following aspects:

1. The use of biological dressings should consider the relationship between risk and benefit; that is, for minor burns, we should prefer alternatives without the possibility of transporting pathogens. Consolidation Ordinance number 4, from the Ministry of Health[3], allows, for example, the use of allograft only in patients with at least 40% of the body surface burned.

2. It is known that the treatment of 2nd-degree deep burns is tangential debridement until tissue viability is met, and autologous skin grafting[4]. Deep 2nd-degree burns treated conservatively will result in great healing and posterior contraction, with significant aesthetic and functional damage. I would like the outcome after one year of treatment of the case in question to be published.

Finally, I would like to declare my great admiration for the work of Dr. Edmar Maciel Lima Júnior's team about the use of tilapia skin to treat large superficial 2nd-degree burns.

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Resposta

EDMAR MACIEL [1]

Dear Rodrigo,

I appreciate your interest in the subject and your kind words of praise for our research development. Let's answer some of your questions:

1. In the vast majority of the Brazilian public health system, dressings for minor burns are performed with 2% silver sulfadiazine ointment, generating daily dressing changes, significant pain, increased teamwork, and increased treatment costs. We do not believe that an aquatic animal's skin, with a quality sterilization process, combined with gamma irradiation, can cause the possibility of pathogen transmission.

Our country has only four allogeneic skin banks (the Ministry of Health says it has 13), well assembled, equipped, and well managed, but with a low production to meet the demand for public burn services. We believe that this ordinance should be revised since the benefits of temporary dressings are unquestionable at the most varied levels of extent and depth of burns.

2. There are deep second-degree burns, the treatment of which can be carried out with the removal of fibrin in the balneotherapy room, with intervals of longer days (3 to 6 days). During this period, dressings with tilapia xenograft can be used, without the need to use tangential excisions and early grafts, with a reduction in this procedure's morbidity and an acceptable healing process.

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