The use of fish scales in the management of burns patients: A literature review

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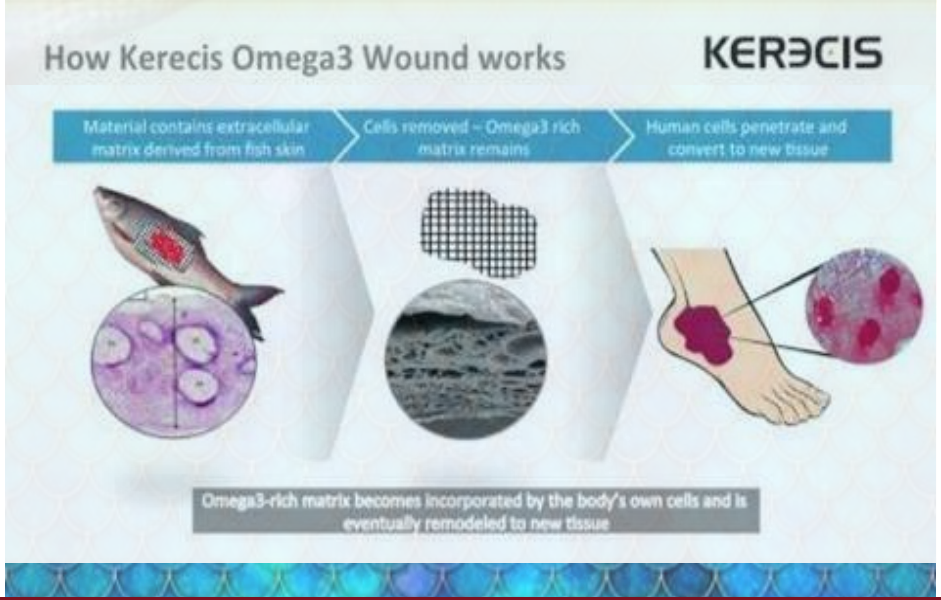
Introduction:

The management of burns is continually evolving. Burns may require multiple dressing changes that are associated with pain, poor wound healing, disease transfer risk (cadaveric skin grafts) and high cost (silver impregnated dressings). Collagen sponge of mrigal fish and acellular fish skin grafts may assist to alleviate these problems. Omega3 Fish Skin by Kerecis has been approved by the Food and Drug Administration (FDA) in the United States.

Method:

A literature search was conducted using search engines Medline, CINAHL and Pubmed. Exclusion criteria were articles in a non-English language, published prior to 2010 and inability to obtain the full text. Key words included 'fish scale collagen', 'burn management', 'burn treatment' and 'omega 3 dressing'.



Results:

Five articles were identified. These showed the highly porous fish skin having superior ability to support 3-dimensional ingrowth of cells at a microscopic level. In a prospective study by Kerecis there was noted faster healing and a reduction in the use of analgesic medication. However, this is a small powered study consisting of 18 patients.

Conclusion:

There are promising preliminary results noted in the US with improved clinical response and reduced disease transfer. The comparison in microscopic techniques with dehydrated human amnion/chorion membrane showed superior ability of ingrowth of cells and a greater bacterial barrier. There were no cultural restrictions whilst using fish scales and it may be a cheaper dressing to manage burns in the future.