

Burns and Fish ?

The skin burn is a type of injury to skin caused by heat, electricity, friction, chemicals, or radiations. there's several degrees of burns 1st degree, 2nd degree or 3rd degree they might termed as superficial burns, partial thickness or full thickness burns in the same order.(1)

Nile tilapia fish or oreochromis niloticus is a type of large genus of tilapia, and its exist in large amounts in African coasts and in Australia, the skin of tilapia is very helpful in treating skin burns its rich in type I and III collagen fibers which help in formation of scarring, reduces the pain, less expensive and promote tissue remodeling and take less time.(2)



Figure 1 (3)

How and When ?

Scientists found that tilapia skin has moisture, collagen and disease resistance at levels comparable to human skin, and can aid in healing. The fish skin is usually thrown away so why don't we convert it into something of social benefit.

In Jaguaribara ,Brazil, April 26, 2017 it has been used on at least 56 patients to treat second- and third-degree burns. The tilapia skin is applied directly onto the burned area and covered with a bandage. After about 10 days, doctors remove the bandage. The tilapia skin, which has dried out and loosened from the burn, can be peeled away.(4)



Figure 2(4)



Figure 4 (4)

Proved Histologically

This study aimed to test the effects of MCPs on scald wound healing rate in 28 days on female and male rabbits by dividing them into 3 groups (model control , positive control, and MCPs group) using moist scald ointment as a control drug. Histological examination, on post-scald day 7 (PSD), coagulation necrosis of the whole epidermis layer. With no significant differences.

On PSD14, few wounds covered by new epidermis and little proliferation of mature granulation tissue were found in the first 2 groups, where's MCPs group had over half wounds covered by new epidermis and much granulation tissue proliferation in the dermis.

On PSD21 MCPs and +ve groups showed the appearance of almost wound coverage by new epidermis, active hair follicle proliferation, fibroblasts and new capillaries, in compared to model group. On PSD28, the wounds were completely covered by new epidermis among the three groups.(5)

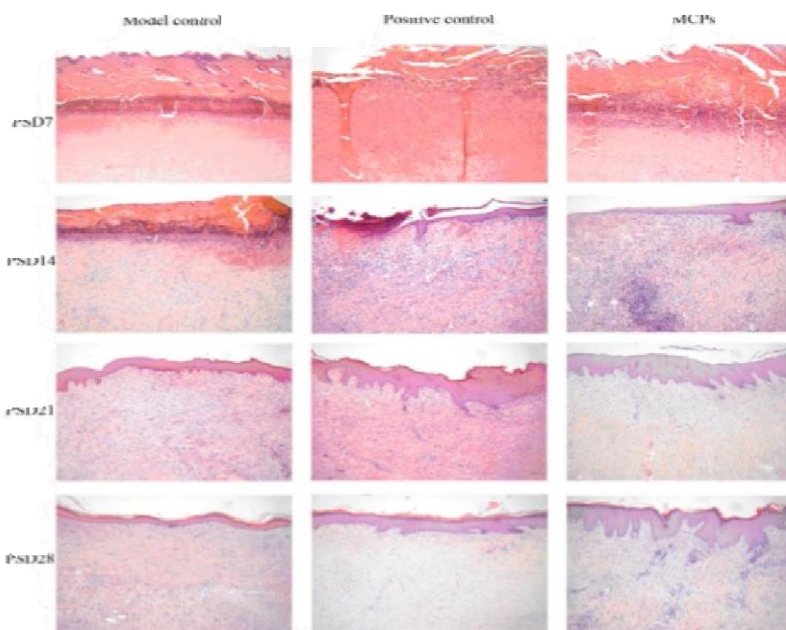


Figure 4 (2)

Conclusion

To sum up MCPs from the skin of tilapia could accelerate the healing process and improve the healing effect of skin scald wounds by reducing inflammation, promoting granulation tissue formation, and facilitating rapid proliferation of epithelial cells, endothelial cells and fibroblasts.

I recommend that this kind of treatment should be used in the Middle east because of the availability of Nile tilapia fish which makes it cheaper than other courses of treatment and more sufficient and has better results in healing wounds.

References

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