Cell migration for in vitro wound healing evaluation - a pilot study on Channa striata

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Abstract: This study was aimed to assess the potential wound healing properties of Channa striatus (haruan) on migration of HaCaT keratinocytes. In vitro study was preferred to provide a clearer view wound healing process at cellular level specifically cellular migration activity. C. striata has been significantly studied to alleviate the healing process. Specific fatty acids and amino acids contents of C. striata had been studied to enhance and rejuvenate the dermal cells in the healing process. Extracts were prepared from whole muscle tissue of the fish by using Folch’s method for the lipids and lysis buffer for the proteins and presence of compounds were positively analyzed via qualitative analysis of gas chromatography mass spectrophotometer (GCMS) and sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE) accordingly. Three different concentrations of lipid extract (0.005 mg/mL, 0.05 mg/mL, and 0.5 mg/mL) introduced onto the scratch assay proved no significant result in migration rate (p>0.05) between treatment groups and control while relation with protein extract failed to be conducted due unavoidable consequence. Association between effects of C. striata extracts on migration activities of HaCaT keratinocytes hardly can be concluded due to several limitations faced hence needs further assessment.

Keywords: Cell migration, wound healing, cell culture, Channa striatus
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