Perspective

iMedPub Journals
www.imedpub.com

American Journal of Phytomedicine and Clinical Therapeutics
ISSN 2321-2748

2022
Vol.10 No.12:168

Phytotherapeutic Agents Have Been Largely Used for Cutaneous Wound Healing

Deborah P Merke*

Department of Pharmaceutical Technology and Bio Pharmacy University of Groningen, The Netherlands

***Corresponding author:** Deborah P Merke, Department of Pharmaceutical Technology and Bio pharmacy University of Groningen, The Netherlands. E-mail: merkeD@gmail.com

Received date: November 30, 2022, Manuscript No. IPAPCT-22-15654; **Editor assigned date:** December 02, 2022, PreQC No. IPAPCT-22-15654 (PQ); **Reviewed date:** December 14, 2022, QC No. IPAPCT-22-15654; **Revised date:** December 24, 2022, Manuscript No. IPAPCT-22-15654 (R); **Published date:** December 30, 2022, DOI: 10.36648/2321-2748.10.12.168

Citation: Merke DP (2022) Phytotherapeutic Agents Have Been Largely Used for Cutaneous Wound Healing Am J Phytomed Clin Ther Vol.10.No. 12:168

Description

Some investigations on the use of bark in phytomedicine were carried out. A comparison of the phytochemicals of re-grown stem bark (after debarking) with those of older bark of the same tree species, revealed that almost all the phytochemicals screened were present in both old and new bark; indicating that the newly-grown bark is also medicinally useful. A taxonomic key that would facilitate the identification of dry bark of 15 frequently used tree species has been constructed. Seven fungal species, Aspergillus niger, Penicillin digitatum, Rhizopus stolonifer, Neurospora crassa, Fusarium flavus, Mucor mucedo and Botryodiplodia theobrome were isolated from bark stored in the market for 1 – 2 years. Some of these saprophytic organisms of stored products may also cause diseases in humans. The implications of these findings for the use of bark in phytomedicine are discussed.

Phytotherapeutic

The proof of efficacy of phytopreparations and the determination of their mode of action are permanent challenges for an evidence-based phytotherapy. The technology platform of genomics, proteomics and metabolomics are high-throughput technologies. They increase substantially the number of proteins/genes that can be detected simultaneously and have the potential to relate complex mixtures to complex effects in the form of gene/protein expression profiles. Provided that phytopreparation-specific signatures in the form of gene/protein expression profiles can be developed, these technologies will be useful for the chemical and pharmacological standardization and the proof of the toxicological potential of a plant extract. Over a long-term perspective they may economize the proof of efficacy, the determination of the mode of action of phytomedicines and allow investigating herbal extracts without prominent active principle(s). The application of this genomics revealed already that gene expression profiles induced by single drugs and the ones induced by the combination of the same drugs can be entirely different. These results make the information of the mode of action of isolated “active principles/lead substances” of phytopreparations questionable. The application of the “-omic-” technologies may lead to a change of paradigms towards the application of complex mixtures in medicine and open the new field of phytogenomics, -proteomics and -metabolomics. Skin integrity is restored by a physiological process aimed at repairing the damaged tissues. The healing process proceeds in four phases: hemostasis, inflammation, proliferation and remodeling. Phytomedicine presents remedies, which possess significant pharmacological effects. It is popular amongst the general population in regions all over the world. Phytotherapeutic agents have been largely used for cutaneous wound healing. These include Aloe vera, mimosa, grape vine, Echinacea, chamomile, ginseng, green tea, jojoba, tea tree oil, rosemary, lemon, soybean, comfrey, papaya, oat, garlic, ginkgo, olive oil and ocimum. Phytotherapy may open new avenues for therapeutic intervention on cutaneous wounds. This article provides a review of the common beneficial medicinal plants in the management of skin wounds with an attempt to explain their mechanisms.

Bioavailability

Skin integrity is restored by a physiological process aimed at repairing the damaged tissues. The healing process proceeds in four phases: hemostasis, inflammation, proliferation and remodeling. Phytomedicine presents remedies, which possess significant pharmacological effects. It is popular amongst the general population in regions all over the world. Phytotherapeutic agents have been largely used for cutaneous wound healing. These include Aloe vera, mimosa, grape vine, Echinacea, chamomile, ginseng, green tea, jojoba, tea tree oil, rosemary, lemon, soybean, comfrey, papaya, oat, garlic, ginkgo, olive oil and ocimum. Phytotherapy may open new avenues for therapeutic intervention on cutaneous wounds. This article provides a review of the common beneficial medicinal plants in the management of skin wounds with an attempt to explain their mechanisms. Plants use complex mixtures of secondary compounds (SM) of different structural classes to protect themselves against herbivores, bacteria, fungi and viruses. These complex mixtures may contain SM, which are specific for a single target (monotarget SM). A majority of SM, however, can interfere with several targets (multitarget SM) in a pleiotropic fashion. The composition of such extracts appears to be optimised, since the components are not only additive but apparently synergistic in their bioactivity. Synergism can be achieved by inhibiting the xenobiotics inactivating activities of animals and microbes (MDR, CYP), by facilitating the uptake of polar SM across biomembranes and/or by affecting several important organs in animals concomitantly. Phytotherapy employs equally complex extracts of medicinal plants. Arguments were put together that the utilisation of complex mixtures with pleiotropic agents presents a unique therapeutic approach with many advantages over monotarget compounds. Mixtures of multitarget SM, used in phytotherapy include phenolics, tannins, mono- and sequiterpenes, saponins, iridoid glucosides and anthraquinones, but only few of them alkaloids or other toxic monotarget SM.Multitarget effects are caused by SM, which can modulate the threedimensional structure of proteins (and thus their function), by interfering with DNA/RNA (especially gene expression) or membrane permeability. In addition, complex extracts may contain synergists, which can inhibit MDR, cytochrome P450 or enhance absorption and thus bioavailability of active metabolites. The molecular modes of action are reviewed for the main groups of secondary metabolites.