conferenceseries.com

Global Congress on

Tissue Engineering, Regenerative & Precision Medicine

December 1-2, 2016 | San Antonio, USA

Evaluation of paavuchooranam prescribed to cure breast cancer by the cheruthikonam traditional siddha medicinal practitioner of Kanyakumari district, India

Mary Suja R and Christudhas Williams B Scott Christian College, India

Breast Cancer is the leading cause of death in women worldwide among other types of cancers.Paavu Chooranam is a Siddha polyherbal formulation prescribed to cure breast cancer patients was prepared by using the ingredients Kottam and Venthayam (1 Kalanchi), Illavangam, Venkadugu, Vasambu and Amukkara (2 Kalanchi), Chukku, Milagu, Thippili, Athimathuram, Omam, Kadugu Rohini and Kandankatthiri (3 Kalanchi), Nellikai, Kadukkai, Thandrikkai, Jathikai, Jathipathiri, Vaalmilagu and Indhuppu (4 Kalanchi), Seeragam, Karamjiragam, Seenthil, Adathodaiver and Thoothuvalai (5 Kalanchi).

The present investigation was mainly focused on the scientific analysis of qualitative, quantitative, antioxidant, cytotoxic and apoptotic activities of Paavu Chooranam. The phytochemical constituents in the herbal formulation revealed positive response of significant secondary metabolites. The unexplored area of PaavuChooranam towards their antioxidation effect of hydroxyl radical scavenging, DPPH, nitric oxide radical scavenging, hydrogen per oxide radical scavenging and reducing power activity in aqueous, silver nitrate and ethanol extracts indicated promising antioxidant activities in a dose dependent manner. The cytotoxic effect of control L929 fibroblast cell line exhibited 100% inhibition. The LC50 value (ED50 plus software V1.0) was obtained at 64.71µg/mg. The morphological detection of apoptotic and necrotic cells determined by Acridine orange and ethidium bromide double staining of control cells observed under fluorescent microscope showed the presence of living cells (normal green nucleus) and absence of early apoptotic, late apotoptotic and necrotic cells but Paavu Chooranam (medicine) showed maximum detection of necrotic cells (uniformly orange stained cell nuclei), followed early apoptotic (bright green nucleus with condensed or fragmented chromatin), late apoptotic (orange stained nuclei with chromatin condensation or fragmentation) and living cells (normal green nucleus).

rmsuja.83@gmail.com

Low virulent bacterial-induced nonunions: Antibiotic and cell-based preventive strategies in animal models

Arianna Barbara Lovati

IRCCS Galeazzi Orthopedic Institute, Italy

 $S_{nonunion establishment. Rat models of subclinical, acute and chronic$ *S. epidermidis* $-induced nonunions were recently created to investigate innovative strategies to prevent low virulent bacterial infections. Femoral fractures were synthesized with stainless-steel plates and injected with increasing bacterial loads to point out the dose-dependent effect between the bacterial inoculum and nonunion rate. The bacterial load leading to acute signs of osteomyelitis was chosen to test locally and systemically the efficacy of vancomycin (I-VANC and s-VANC) or allogeneic mesenchymal stem cells in the prevention of the pathology (I-MSCs and s-MSCs). The host response to treatments was assessed by blood analyses, plasma pro-inflammatory cytokines, as well as by micro-CT, histological and microbiological analyses. Half of the s-MSCs rats died closely to the systemic cell injection. In s-VANC and I-VANC groups, imaging analysis showed a good bony bridging, histologically confirmed by a mature bone development along with a bacterial count under the limits of detection. The I-MSCs group showed a poor bony bridging consisting in inflammatory and fibrovascular tissue. These data were consistent with the neutrophil counts and elevated plasma levels of IL-1a, IL-1\beta and TNF-a. Our results suggest that the infected-nonunion establishment can be prevented by the synergic use of systemic and local vancomycin injection. Otherwise, cell therapies cannot be considered usable due to the high risk occurred in cell systemic injection and deeper investigations are required to better identify the immunomodulatory role of MSCs in the presence of bacteria.$

arianna.lovati@grupposandonato.it

Volume 7, Issue 3(Suppl)