PROTECTIVE PROPERTIES OF KEFIR ON BURN WOUNDS OF MICE THAT WERE INFECTED WITH S. AUREUS, P. AUROGINASA AND E. COLI

[1]SONGUL CETIK YILDIZ, [2]CEMIL DEMIR, [3]MUSTAFA CENGIZ, [4]ADNAN AYHANCI

[1,2]Mardin Artuklu University, VocationalHigher of Health Services- Department of Medical Services andTechniques,Mardin, Turkey.
[3]Siirt University, Department of MathematicsandPhysicalSciencesEducation, Siirt, Turkey.
[4]Eskisehir Osmangazi University; Science Faculty, Department of Biology, Eskisehir, Turkey

Abstract - Purpose: The aim of this study is to investigate possible protective properties of kefir which is natural and antimicrobial in health and quality of life that is used on the burn wounds that were infected with S. aureus, P. auroginasa and E. coli.Methods: To investigate protective effects of kefir; healthy, male, about 3 months old and about 30 g weight mice were used andtested animals were divided into four groups as follows: 1st group was used as control group, 2ndgrup mice were shaved on their back and they were subjected to second-degree skin burns by electrical scald instrument and each animals' burn wound was treated with sterile pads dressed with kefir. 3rd group's burn wounds were infected with P.aeruginosa + S.aureus + E.coli (2-8 x 10^5 CFU/mL). 4th group's burn wounds were infected with P. aeruginosa + S. aureus + E.coli before being treated with sterile pads dressed with kefir. All the animals' 1st, 2nd and 3rd dayblood samples were taken and calculated with a cell counter (Coulter).Also, burn wounds' tissue samples were examined histologically. Results: The number of leucocytes, thrombocytes, neutrophil, monocyte and lymphocyte were found to be important statistically($p<0.001$).There was seen an important wound healing in bacteria plus kefir administered group(4th) compared to only bacteria group(3rd). In 2nd group was seen that kefir could protect tissue cells in spite of the burn wound. Conclusion: Kefir is an importantantimicrobial which is promising for the treatment of second-degree burns.

Keywords -Kefir;Second-degree burns; burn wound; Wound healing;P. aeruginosa; S. aureus; E. coli; Antimicrobial, Mice