

Antimicrobial Effects of Depilatory Creams

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Aim of study: Depilatory creams are cosmetic products that are applied on unwanted hair to temporarily remove them. Depilatory products are available as cream and spray. It's some kind of depilation. Makes the hair fell off by breaking down the protein structure. The microorganisms used in this study are; positive and negative effect and pathogenic species commonly found in natural environments inhabited by humans. This study was carried out to observe whether or not the hair loss creams affect the microflora and pathogenic microorganisms on the skin.

Materials and Methods: The antimicrobial activity of the products was investigated in some *Candida* species isolated from pathogenic samples (*Candida albicans* ATCC 10231, *Candida utilis* ATCC 9950, *Candida glabrata*); Gram-negative bacteria (*Pseudomonas aeruginosa* ATCC 35032, *Escherichia coli* ATCC 35218, *Klebsiella pneumoniae* ATCC 13882, *Enterobacter aerogenes* ATCC 13048, *Serratia marcescens* ATCC 13880, *Salmonella typhimurium* ATCC 14028, *Proteus vulgaris* ATCC 33420; Gram-positive bacteria (*Staphylococcus aureus* ATCC 25923, *Bacillus subtilis* ATCC 6633, *Micrococcus luteus* ATCC 9341). Disk diffusion method was used and the resulting zone diameters were measured. Nutrient Agar and Malt Extract Agar were used for activation of bacteria and yeast, respectively. The cultures were incubated at 30-37°C in overnight. The inoculum size of each group of bacteria and yeast were prepared by using a no. 0.5 McFarland tube. It was kept to solidify at room temperature for a while and then holes were made on top with a sterile stick. 0.1 g of the cream was dissolved homogeneously in 0.5 ml of distilled water. These holes were filled with 50µl of cream samples. At the end of incubation time, the diameters of the inhibition zones formed on the Mueller-Hinton Agar were evaluated in millimeters.

Results: As a result of the study, no antimicrobial activity was found in the creams used in the study. Creams cause hair loss by breaking down the proteins in the hair follicles, but no effect on microorganisms means that there is no effect on the protein structure in the cell wall. In this kind of unwanted hair cleaning, only the use of creams is insufficient and personal hygiene has to be done as well.

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Keywords: Depilatory creams, Antimicrobial activity, Disk diffusion method