

Antibacterial Effect of Human Amnion Membrane

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Abstract

Background and Objective: Along with antibiotics, the use of biological methods to combat bacteria is notably considered. A natural barrier such as amniotic membrane is one of the ways of dealing with bacterial infections. The aim of this study was to determine the antibacterial effect of human amniotic membrane.

Materials and Methods: This descriptive study was performed in Dezyani teaching Hospital of Gorgan University of Medical Sciences, Iran. To evaluate the antibacterial activity against *Staphylococcus aureus*, *Pseudomonas aeruginosa* and *Escherichia coli* bacteria, 20 amniotic membranes were obtained from postpartum mothers and examined by repeated dilution, diffusion and extraction techniques. Data were collected by observation method and described by mean and standard deviation.

Results: The antibacterial activity was found in 15% of the samples against *Staphylococcus Aureus* and *Pseudomonas aeruginosa*, while no antibacterial activity was found against *E. coli*. Given the 15% positive responses, "Diffusion" and "repeated dilution" techniques were more effective in investigating the antibacterial effect of amniotic membrane.

Conclusion: The results show the probability of antimicrobial effect of amniotic membrane tissue and it seems that this property can be affected by many factors.

Keywords: Amniotic Membrane, Anti-Bacterial Properties, Laboratory Methods