

K.S.Volkov
S.B.Kramar

I.Ya.Horbachevsky
Ternopil State Medical
University

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ROLE OF EPITHELIAL-MESENCHYMAL TRANSITION IN THE PATHOGENESIS OF DERMAL WOUND HEALING

ABSTRACT. Background. Investigation of mechanisms of wound healing remains relevant. It remains unknown the role of epithelial to mesenchymal transition in the regeneration. Epithelial to mesenchymal transition is a fundamental process, that leads epithelial cells to lose their polarization and specialized junctional structures, to undergo cytoskeleton reorganization, and to acquire morphological and functional features of mesenchymal-like cells. Epithelial to mesenchymal transition has been originally described in embryonic development, regeneration and several pathophysiological conditions. **Objective** is to investigate the role of epithelial to mesenchymal transition in wound healing. **Results.** The key points in the implementation mechanisms of epithelial to mesenchymal transition are described. The initiating role of growth factors and signaling pathways, participates in the development of epithelial to mesenchymal transition, are indicated. The comparative characteristic of incomplete epithelial to mesenchymal transition in the wound healing and completed epithelial to mesenchymal transition during pathological processes are given. Such kinds of epithelial to mesenchymal transition as endothelial-mesenchymal transition and back-mesenchymal to epithelial transition and their role in the wound healing process are enlightened. **Conclusion.** Epithelial to mesenchymal transition is a fundamental mechanism of histogenesis and tissue regeneration. Understanding the epithelial to mesenchymal transition and the factors involved in will help to create a theoretical framework for the development of new approaches to rational therapy of wound healing.

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