A MODERN VIEW ON THE IMMUNOLOGICAL MECHANISM OF WOUND HEALING

KRZYSZTOF TYBURCZY¹ and ANDRZEJ ZIELIŃSKI²
¹MHA Polyclinic, Suwałki, Poland, ²Department of Histology and Embryology, Medical University of Łódź, Poland

‘None of the disciplines can take responsibility for wound healing’ said W.H. Eaglstein, showing the importance of this problem. The problem of wound healing, which has been present for centuries, is one of the oldest in the history of medicine. However, the methods of wound healing have not changed a lot in comparison to methods in the other domains of medicine. A lot of exogenous and endogenous factors influence this process. Together with the progress in medical sciences, including research on immunosuppression, new methods influencing the pathophysiology of this phenomenon have been discovered. The activation in a wound of such cytokines as IL-1, TNF-α & TGF-β, and later on VEGF has been proved. However, the improvement of wound healing has been confirmed after the administration of PDGF, bFGF, and TGF-β. The cytokines mentioned above significantly influence the proteinases (collagenase, gelatinase, and stromelysinase), which take part in wound healing. On the one hand, some neuropeptides (VIP, CGRP, P substance) also have a supporting action on this process. Immunosuppressive actions, on the other hand, lead to the disturbance of wound healing. Apart from immunological mechanisms, the morphoclinical processes of wound healing have also been shown in this study.