

Abstract

Healing is a complicated physiological process where happen to restituion of damaged function and the structure of the skin. The length and the quality of healing depends on both external (necrotic tissue, lowered pH of wound, infection) and internal factors (cytokins, growth factors, MMPs). Matrix metalloproteinases (MMPs) are a group of similar structure (zinc-dependent proteases) discovered in connection to their capacity of retrace extracellular matrix proteins such as collagen and elastin. MMPs which concerned in the process of healing are collagenases (MMP-1, MMP-8, MMP-13), stromelysins (MMP-3, MMP-11), gelatinase A (MMP-2) and gelatinase B (MMP-9). Their inhibition leads to uprate and speed of healing up. They are the part of a „Modern therapy“. Expression of MMP-2 during inflammation period is demonstrated by imunohistochemistry in this work. Simultaneously we observe here a influence of MDOC™ to an acute wound. MDOC™ is Micro-dispersed Oxidised Cellulose who speed the stopbleeding up. The histological results demonstrated in compare with control sample that maturation of new tissue goes more quickly with using the MDOC™. The inflammation uprise more quickly but on the other side goes earlier off. In comparison of varied drug forms of MDOC™ were not observe significant differences in effect and speed of healing or in the quality of new tissue. The same results were with changes of chemical composition of drug forms.