عنوان مقاله:

Assessment of Cytokine-Mediated Signaling Pathway Dysregulation in Arm Skin After CO۲ Laser Therapy

محل انتشار:

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خلاصه مقاله:

Abstract Introduction: Laser therapy is known as an efficient approach in dermatology surgery. CO۲ laser therapy is a gold standard treatment in skin surgery. This study aimed to evaluate the interferons change after CO۲ laser surgeryMethods: Significant differentially-expressed genes (DEGs) of arm skin after ۷ days of treatment by the CO۲ laser relative to the controls are downloaded from Gene Expression Omnibus (GEO) and are included in the protein-protein interaction network via a STRING database (an application of Cytoscape software). The central DEGs were identified and enriched via gene ontology by using Clue GO software. Results: A network including ۷۸ DEGs and ۱۰۰ neighbors was constructed and STAT۱, MX۱, ISG۱۵, OAS۱, IFIT۱, IRF۸, OASL, OAS۲, and RSAD۲ as hubs and STAT۱, PTPRC, MX۱, IRF۸, ISG۱۵, IL۶, RORC, SAMSN۱, and IFIT۱ as bottlenecks were introduced. The cytokine-mediated signaling pathway, interferon gamma signaling, hepatitis C, interferon alpha/beta signaling, and the type I interferon signaling pathway were identified as five clusters of biological terms which are related to the central nodes.Conclusion: It can be concluded that the cytokine-mediated signaling pathway is the major pathway that is dysregulated after laser application in the treated skin. Keywords: Laser CO۲ Skin Interferon Gene Network

کلمات کلیدی: