STUDY ON THE EFFECTS OF ILK ON PROLIFERATION AND DIFFERENTIATION OF FIBROBLAST IN HYPERTROPHIC SCAR (P214)

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**Objective:** To study the role of ILK on the proliferation and differentiation of human fibroblast in hypertrophic scar and its effect on the scar formation.

**Methods:** The human scar fibroblasts were isolated and cultured in vitro. The siRNA sequences targeting to ILK gene and ILK expression plasmid (ILK cDNA) were designed and constructed, and than were transfected into fibroblasts of scar under the mediation of jetPRIMETM respectively. The cells were divided into 4 groups: the control group; jetPRIMETM group; ILK siRNA group; ILK cDNA group. The cell proliferation was detected by XTT assay and the mRNA and protein expressions of ILK and α-SMA were detected by RT-PCR and Western blot.

**Results:** XTT results showed that the cellular proliferation level in ILK siRNA group was significant lower than those in other groups(P<0.05), while the cellular proliferation level in ILK cDNA group was the highest among all 4 groups. The RT-PCR showed that the ILK mRNA expression was lower in ILK siRNA group and higher in ILK cDNA group than those in other groups(P<0.05), while the expressions of α-SMA mRNA had the same changes with ILK. The western blot also showed that the expression of ILK and α-SMA proteins were decreased in ILK siRNA group and increased in ILK cDNA group.

**Conclusion:** ILK may promote the proliferation and differentiation of human scar fibroblast, it is maybe an important role to scar formation and contracture.