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| **Evaluation of protein biomarkers in wound fluid for prediction wound healing in diabetic foot ulcers by Luminex assay** |
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| **OBJECTIVE:** **The aim of this study was to measure the concentration of multiplex protein biomarkers in wound fluid obtained from diabetic foot ulcers and to examine their correlation with wound healing** **METHODS:** **Wound fluids were collected from the ulcer of diabetic patients (N=60) at the first clinic visit and after four weeks of treatment. Samples were tested for biomarkers level by using a six-plex Magnetic- based Luminex kit (R&D systems), including;Il-2 , IL-4, IL – 6, IL – 8, TNF – α, MMP – 1. All measurements were done by Luminex 200 analyzer with Exponent 3.1 software.** **Data were analysed by the degree of ulcer size and wound healing rates during four weeks: good healers (reduction of at least 85% in initial wound surface at four weeks) and poor healers (reduction of less than 70% in wound surface during four weeks).****Multiple regression analysis was used to determine the correlation between WHR4 weeks and wound fluid levels of protein biomarkers.****RESULTS:** **Concentration of all biomarkers correlated inversely with the wound healing rate at 28 days** **(P < 0.001). Levels of protein biomarkers were decreased at least two times more in good healers during four weeks in comparison to poor healers.****CONCLUSIONS:****These findings suggest that multiplex Measurements of such protein biomarkers in wound fluid could be used as an efficient method to identify ulcers at improve of wound healing in diabetic foot ulcers.** |