Effect Of Psoriasis Therapy On Vasculare Endothelial Growth Factor Serum Concenteration

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Psoriasis is an immune-mediated, multifactorial skin disease with hyperproliferation and altered differentiations of keratinocytes, linking the pathways of angiogenesis and inflammation. Vessels expansion seems to play an important role in the evolution of psoriatic plaques. Several growth factors, which include PDGF, FGF, EGF and TGFα and -β, demonstrate angiogenic activity. However, VEGF is recognized as a pivotal factor responsible for angiogenesis in different tissues. Therefore, we focused on involvement of this protein in the pathogenesis of psoriasis.VEGF is also known as a vascular permeability factor, based on its ability to induce vascular leakage. In the meantime it is well established that such permeability enhancing activity underlies significant roles of this molecule in inflammation and other pathological circumstances. Besides its potential role in causing aberrant angiogenesis and vascular leakage in the upper dermis, VEGF may also contribute to keratinocyte proliferation and epidermal barrier homeostasis. In psoriatic skin, the VEGF receptors VEGFR-1 and -2 are detectable and functional in keratinocytes. As VEGF is secreted by keratinocytes and induces VEGFR expression in the same cells, VEGF may also contribute to keratinocyte hyperproliferation in psoriasis in an autocrine manner.In this study we measured the levels of VEGF in serum of psoriatic patients before and after treatment with NB-UVB (group A) and tazarotene (group B) to demonstrate its correlation with psoriasis and PASI scores; in comparison to controls.VEGF levels were, consistent with most previous reports, significantly higher than those in controls.Despite significant reduction, VEGF concentrations measured after the treatment remained significantly higher than that in controls.There was a significant correlation between VEGF serum concentrations measured before and after the treatmentVEGF levels correlated positively with PASI score before and after treatment.There was significant change -regarding PASI score in group A patients while the change in group B was non significant and that most probably due to poor sensitivity of PASI score to change for relatively small areas of involvement.Some studies did not found correlation between PASI score and VEGF levels in serum or between its levels in psoriatic patients and healthy controls so its measurement has no value in evaluation of disease progression.In conclusion, this study has agreed with published results considering the fact that angiogenesis is playing an important role in pathogenesis of psoriasis , and VEGF has been identified as the most potent and predominant factor of angiogenesis. Also Results of this study provide rationale for possible

application of VEGF serum measurement as biomarkers of psoriasis activity and predictor of possible exacerbation. As VEGF is currently considered as possible targets of future psoriasis therapies, their measurement could also be useful in the evaluation of the treatment efficacy. Further studies should be focused on changes of VEGF concentrations during different therapeutic methods.