ABSTRACT

Background: Vitiligo is the most commonly seen depigmentation disease with complex pathogenesis that is not well understood and the outcome of therapy is often unsatisfactory. MITF is a new melanocytic marker that allows estimation of the number of melanocytes in the epidermis and to detect function decline. To see the role of MITF, another melanocyte marker is required. Protein S100 has been known to have high sensitivity in melanocytes, may help visualize the decrease in the number of melanocytes. By proving the role of MITF and S100 protein by looking at increasing the number of MITF and S100 proteins in vitiligo after NB-UVB therapy, it can be an indicator of the efficacy of vitiligo therapy.

Purpose: To compare the number of MITF in vitiligo patients before receiving NB-UVB therapy and after NB-UVB therapy and compare the number of S100 proteins in vitiligo patients before receiving NB-UVB therapy and after NB-UVB therapy.

Method: A study was conducted on 24 samples consisting of 12 pre-test samples and 12 post-test samples. Each sample was recorded and 3 mm biopsy was performed before and after receiving NB-UVB therapy, MITF immunohistochemistry and S100 protein were performed to calculate the amount of MITF and S100 protein.

Results: There was a significant difference between the number of MITFs in vitiligo before and after NB-UVB therapy, \( p = < 0.001 \) \( (p = <0,05) \) and there was a significant difference between the amount of S100 protein in vitiligo before and after NB-UVB therapy, \( p = 0.002 \) \( (p = <0,05) \), while no significant difference between MITF and S100 protein with \( p = 0,906 \) \( (p = > 0,05) \).

Conclusions: There was an increase in the amount of both MITF and S100 protein in vitiligo after NB-UVB therapy than before NB-UVB therapy. Immunohistochemistry examination of MITF or S100 protein may be considered an indicator of the efficacy of therapy in evaluating vitiligo therapy objectively.

Keywords: MITF, S100 protein, vitiligo