

Introduction

Psoriasis is a common chronic inflammatory skin disease that affects 2–3% of the world's population and greatly impairs the quality of life of affected individuals. Recent studies showed that IL36R blockade by IL-36Ra or a neutralizing IL-36R antibody decreases the inflammation in ex vivo and in vivo experimental models of psoriasis. IL-38 is a 17-18 kD protein sharing 40% sequence similarity with IL-1RA and IL-36Ra antagonists and elicits its antagonistic effects through binding to IL-36 receptor, as IL-36Ra. IL-38 is reduced in the epidermis of psoriatic lesions as compared with uninvolved skin.

Aim of the Work

The aim of this study was to assess the correlation between immunohistochemical expression of both IL17A and IL38 in psoriatic skin and their relation to disease severity and activity.

Subjects and Methods

Patients were subjected to: Sex and age recording, general history taking, psoriasis history. General dermatological examination was conducted to assess the distribution and the severity of psoriasis, which was calculated using psoriasis & severity index (PASI score).

Lesions were photographed accurately using the same camera settings.

Five mm punch biopsy was taken from lesion al skin for all participants mainly from trunk and legs ,The biopsies were obtained under local anesthesia.

Samples were subjected to histopathological examination with Hematoxylin and eosin and immunohistochemical study for both IL17A and IL38.

Punch biopsies sized 5 mm were also obtained from healthy volunteers or normal skin specimens obtained during plastic surgeries, subjected to histopathological examination with Hematoxylin and eosin and immunohistochemical study for IL17A and IL38 as well.

Results

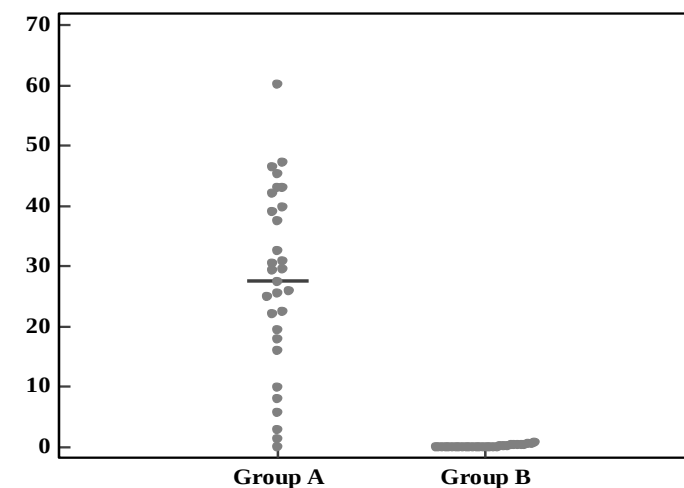


Figure 1: Comparison between the two studied groups according to the percentage of IL17A % immunostaining

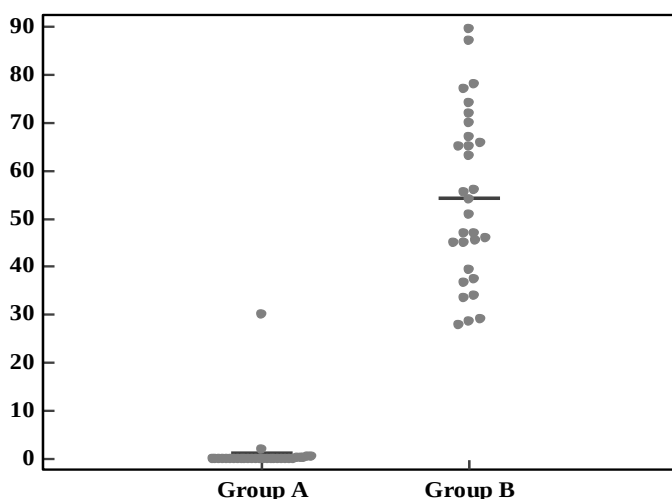


Figure 2: Comparison between the two studied groups according to the percentage of IL38% immunostaining

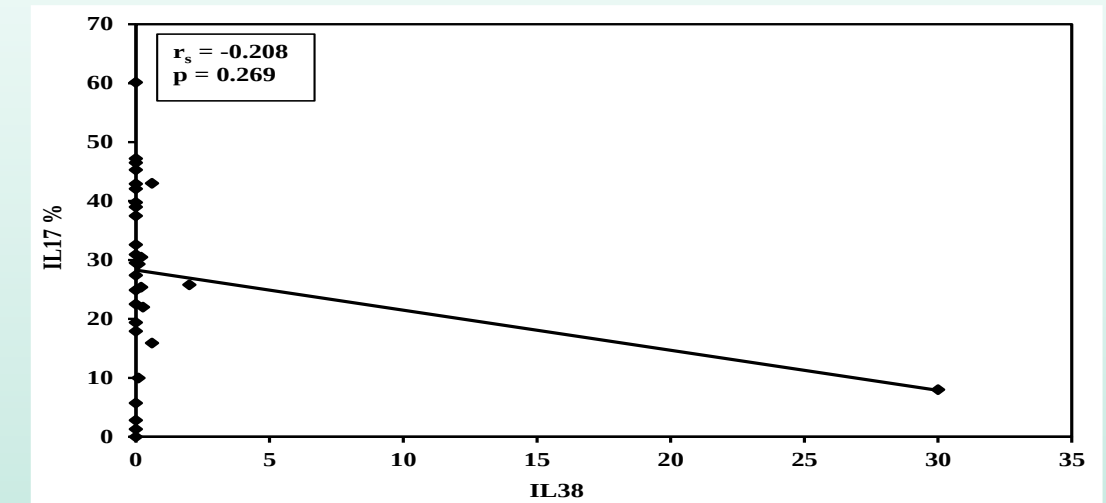


Figure 3: Correlation between IL17A % with IL38% in epidermis in group A (Patients with active psoriasis) (n = 30)

Conclusion

- Psoriatic skin exhibits significant histopathological features in the form of increase in stratum corneum thickness (μm), full epidermal thickness (μm), the presence of Munro's microabscess, parakeratosis, increased dermal papillae thickness (μm), and dermal inflammatory infiltrate in comparison to perilesional skin.
- IL-38 immunohistochemical staining was inversely correlated with clinical parameters such as disease severity and duration of disease.
- IL38 immunohistochemical expression was significantly lower at lesional psoriatic skin.