

## DISCUSSION

Psoriasis is a chronic immune skin disorder that affects 1%–3% of the world's population. The frequency of scalp involvement in patients with psoriasis ranges from 50 – 80 %.<sup>(136)</sup>

Psoriasis often linked with genetic and environmental triggers, it is characterized by hyperproliferation of the skin's epidermal layer. The scalp is a favored site for psoriasis and may be the only site affected. Plaques are similar to those of the skin. It may extend beyond the hairline onto the forehead which is relatively common. Involvement of the posterior auricular crease with scaling and fissuring is common in psoriasis.<sup>(137)</sup>

Seborrheic dermatitis is a very chronic inflammatory skin condition with prevalence about 2.3–11 %. It is worldwide condition. Seborrheic dermatitis was hypothesized to be a result of an altered host immune response to malassezia species or their toxins, or to the free fatty acids produced by malassezia species. Seborrheic dermatitis of the scalp shows ill-defined pink or skin coloured patches with yellowish or greasy-looking scales. It may spread to involve the greater part of the scalp and extend beyond the frontal hairline. Seborrheic dermatitis is common within the eyebrows, on the edges of the eyelids, sticky crusts and fissures are common in the folds behind the ear.<sup>(138,139)</sup>

Dermoscopy or dermatoscope, has proven to be a valuable tool allowing the clinical diagnostic accuracy and improving physicians' confidence in their clinical diagnosis.<sup>(117)</sup> The use of dermoscopy permits the visualization of morphologic features that are not visible to the naked eye, thus representing a link between macroscopic clinical dermatology and microscopic dermatopathology.<sup>(118)</sup>

DermLiteIII (DL3), is the first handheld DermLite to integrate a 25mm four-element lens, this greatly reduce the optical distortion and allow sharper image. Its high powered light emitting diodes (LED) produce more illumination and a brighter image than the equivalent mode in the previous types.<sup>(118)</sup>

Dermoscopy was used mainly in differentiating malignant pigmentary disorders, but the usefulness of dermoscopy has been extended to the diagnosis of non pigmentary skin disorders. For example; diagnosis and management of inflammatory dermatoses, parasitic invasions, cutaneous and mucosal infections, nail abnormalities, and disorders of hair and scalp such as alopecias, scalp psoriasis and seborrheic dermatitis of the scalp.<sup>(119)</sup>

Both psoriasis and seborreic dermatitis are common conditions that affect the scalp. They share some signs and symptoms, such as itchy, red scaly skin, these often make them difficult clinically to be distinguished from one another. This can be done by defining the characteristic vasculature of both conditions.<sup>(141)</sup>

The aim of this work was to study the usefulness of dermatoscope in distinguishing scalp seborrheic dermatitis form scalp psoriasis based on the vascular pattern.

This study included 15 psoriatic patients, in addition to 15 seborrheic dermatitis patients. They were collected, from outpatient clinic of the Dermatology, Venereology and Andrology department, Alexandria Main University Hospital. They were subjected to full history taking, complete clinical examination, dermoscopic examination and then skin biopsy to confirm the diagnosis.

In the present study, dermoscopic examination revealed that 80% of psoriatic patients had white scales while only 20% had yellow scales.

This result agreed with the results of Lallas A. et al (2014)<sup>(142)</sup> who detected white scales in 64.7 % out of 85 patients with psoriatic plaques located in the scalp, face, palms, soles, folds and genitalia.

In our study, the yellow scales were found in all seborrheic dermatitis patients (100%). Similar results were reported also in Lallas A et al (2013)<sup>(143)</sup> study who found yellow scales in 77.3% of seborrheic dermatitis patients.

It seems that the white scales in psoriasis and the yellow scales in seborrheic dermatitis are considered as a differentiating dermoscopic features for both diseases.

As regard the dermoscopic vascular patterns, our study showed that red dots and globules were found in 86.7% in psoriatic group while they were absent in seborrheic dermatitis patients.

These findings were in accordance with the findings of many other previous studies where Lallas A et al in 2012<sup>(144)</sup> and in 2014<sup>(143)</sup> revealed that the dotted vessels were found in 88% and 97.1 % in plaque psoriasis respectively. Also this vascular pattern was detected in all patients (100%) with psoriatic plaques both in Saleh M et al (2014)<sup>(145)</sup> and Ross et al (2006)<sup>(16)</sup> studies.

In this study, the twisted vascular pattern was found in 66.7% of psoriatic group and only in 13.33% of seborrheic dermatitis patients. These findings agreed with the results of the study carried out by Ross et al (2006)<sup>(16)</sup> who found that this vascular pattern was a distinctive dermoscopic feature of their 23 patients with scalp psoriasis.

Also, Paolo Rosina et al (2007)<sup>(146)</sup> reported that the twisted red loop pattern was the characteristic video-dermoscopic feature of scalp psoriasis in their study.

The present study showed that 73.33% of our psoriatic patients were presented with glomerular vessels while it was found only in 13.33% in seborrheic dermatitis group.

These results agreed with that of Kim GW et al (2010)<sup>(14)</sup> who found this vascular pattern in 65% and in 22% of their psoriatic and seborrheic dermatitis patients respectively.

According to the above mentioned results, the dotted, globular, twisted and glomerular dermoscopic vascular patterns were proved in this study to be statistically significant dermoscopic features of psoriatic plaques in comparison to seborrheic dermatitis lesions.

In the present study, we found arborizing dermoscopic vascular pattern in 73.33% of seborrheic dermatitis group in comparison to only 20% in psoriatic patients. These findings go in accordance with that of Kim GW et al (2010)<sup>(14)</sup> who reported that this pattern was detected in 49% and only in 9% of seborrheic dermatitis and psoriatic patients respectively.

Again, featureless vascular pattern was found in 66.7% in seborrheic dermatitis patients in our study in comparison to only 6.6% in psoriatic group.

These results agreed with that of Kim GW et al (2010)<sup>(14)</sup> who found this vascular pattern in 24% of seborrheic dermatitis patients but only in 7% of psoriatic group.

According to these two last observations, the arborizing and the featureless vascular patterns were proved in this study to be statistically significant dermoscopic features of seborrheic dermatitis lesions in comparison to psoriatic plaques.

Some of the results in this study appeared to be higher than the corresponding results of the previous studies. This can be explained by the difference in methodology where our study was restricted only to the scalp lesions and also we used the dermoscope Dermlite III (DL3) which offers greatly reduced optical distortion and sharper images that allow better visualization of the skin vascular pattern.

The current study showed a close association between dermoscopic features and underlying histological pictures. Red dots and globules represent the tortuous dilated blood vessels within the elongated dermal papillae, which are the characteristic histological features of psoriasis. The arborizing vessels and the featureless vessels observed in seborrheic dermatitis represent the dilated subpapillary plexus and the perivascular inflammation that present in seborrheic dermatitis. These findings were reported also by Kim G.M. et al (2010).<sup>(14)</sup>