

# Dermscopy In Vitiligo : An Activity Assessment Tool ?

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### 1. Introduction

Vitiligo is the most frequent cause of depigmentation worldwide. It is a clinical diagnosis. Disease activity is a key parameter to consider when indicating treatment. Assessing vitiligo activity was longtime based on clinical evaluation and Wood lamp. Recently, dermscopy is considered an adjunct tool, not only to exclude other clinically simulating hypopigmentary conditions, but also to assess disease activity [1]. The aim of our study is to investigate the dermscopic features of vitiligo at different stages of disease activity.

### 2. Materiel and Methods

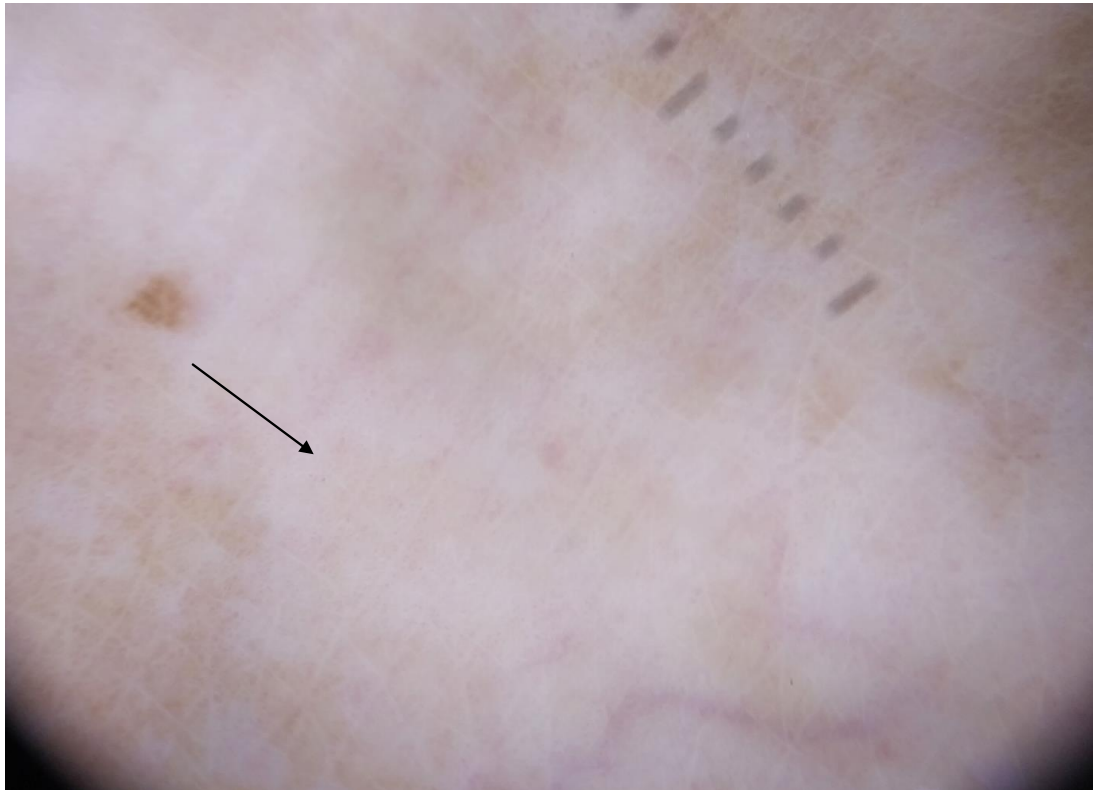
Prospective descriptive study including 37 cases of vitiligo at different stages of disease activity. Dermscopy was performed using a polarized mode. Dermscopic evaluation included altered pigmentary network, intra-lesional, perilesional, follicular and perifollicular features, and presence of specific features like the starburst appearance and comet tail appearance.

### 3. Results

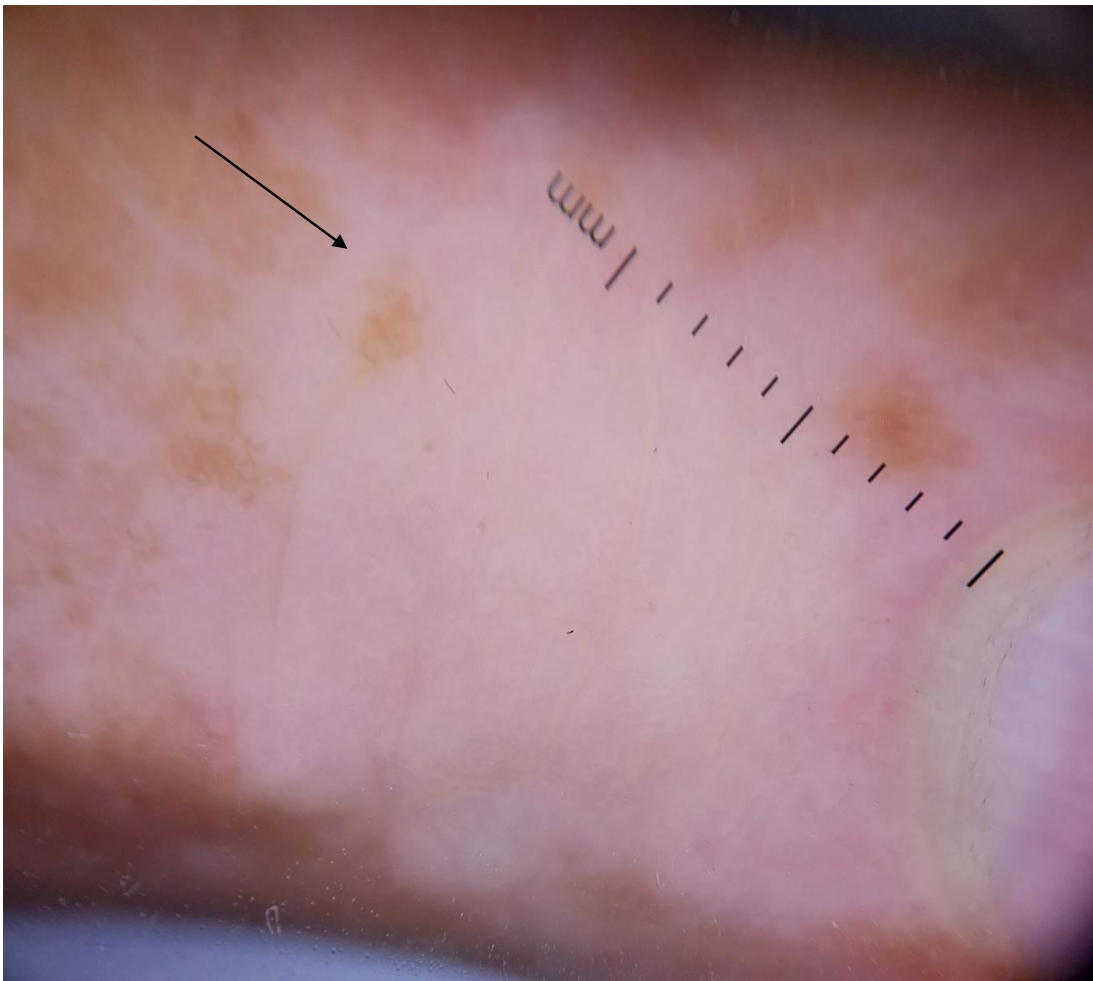
37 patients were prospectively studied. 10 cases of stable vitiligo, 19 cases of progressive disease, and 8 cases of repigmenting vitiligo. 26 women and 11 mens. The mean age was 43,5. The dermscopic features found in our patients were whitish areas (figure 1) observed in all our patients (100%), starburst appearance (figure 2) in 19 patients (51,35%) and comet tail appearance (figure 3a,b) in only 7 patients (18,91%). Perifollicular pigmentation (figure 4) was noted in 25 patients (67,56%), while perifollicular depigmentation was only seen in 12 patients (32,43%). Leukotrichia (figure 5) was observed in 10 patients (27%), Intra/perilesional erythema (figure 6) in 5 patients (13,51%) and telangiectasias (figure 6) in only 2 patients (5,40%). For dermscopic features of adjacent skin to vitiligo lesions, perilesional hyperpigmentation (figure 7) was seen in 18 patients (48,64%) and trichrome appearance (figure 8) was noted in 9 patients (24,32%).

Dermscopic features	No of cases (n)	Stable vitiligo (n1)	Instable vitiligo (n2)	Repigmenting vitiligo (n3)
Whitish areas	37 (100%)	10(27%).	19(51,35%)	8(21,62%).
Starburst appearance	19 (51,35%)	--	19 (100%).	--
Comet tail appearance	7 (18,91%)	--	7 (100%).	--
Perifollicular pigmentation	25 (67,56%)	6(24%).	16 (64%).	2 (8%).
Perifollicular depigmentation	12 (32,43%).	6 (50%).	2 (16,66%).	4 (33,33%).
leukotrichia	10 (27%)	3 (30%).	5(50%).	2(20%).
Intra/ perilesional erythema	5 (13,51%)	3(60%).	--	2(40%).
Telangiectasias	2 (5,40%)	--	--	2 (100%).
Perilesional hyperpigmentation	18 (48,64%)	10 (55,55%).	2 (11,11%)	6(33,33%).
Trichrome appearance	9 (24,32%).	--	9 (100%)	--

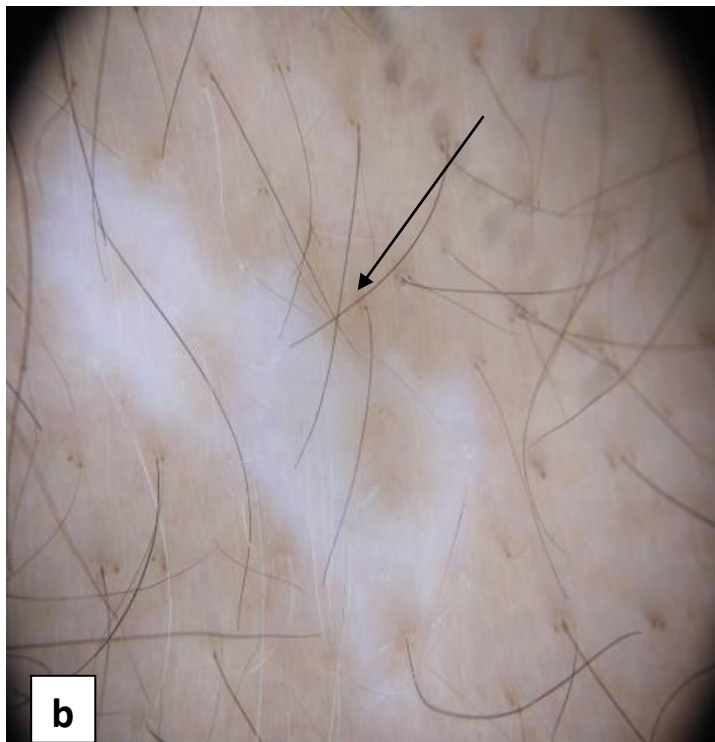
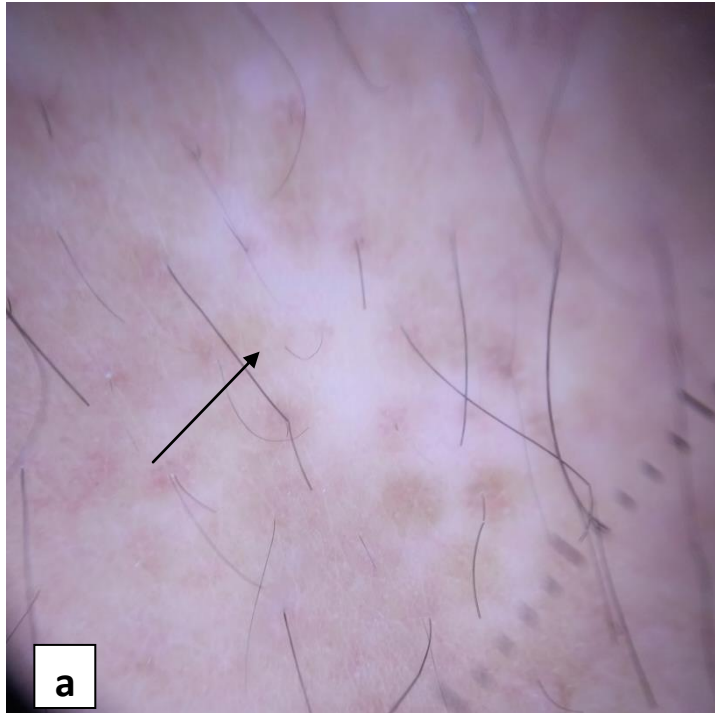
**Table 1: Repartition of the dermscopic features according to the different stages of vitiligo activity**



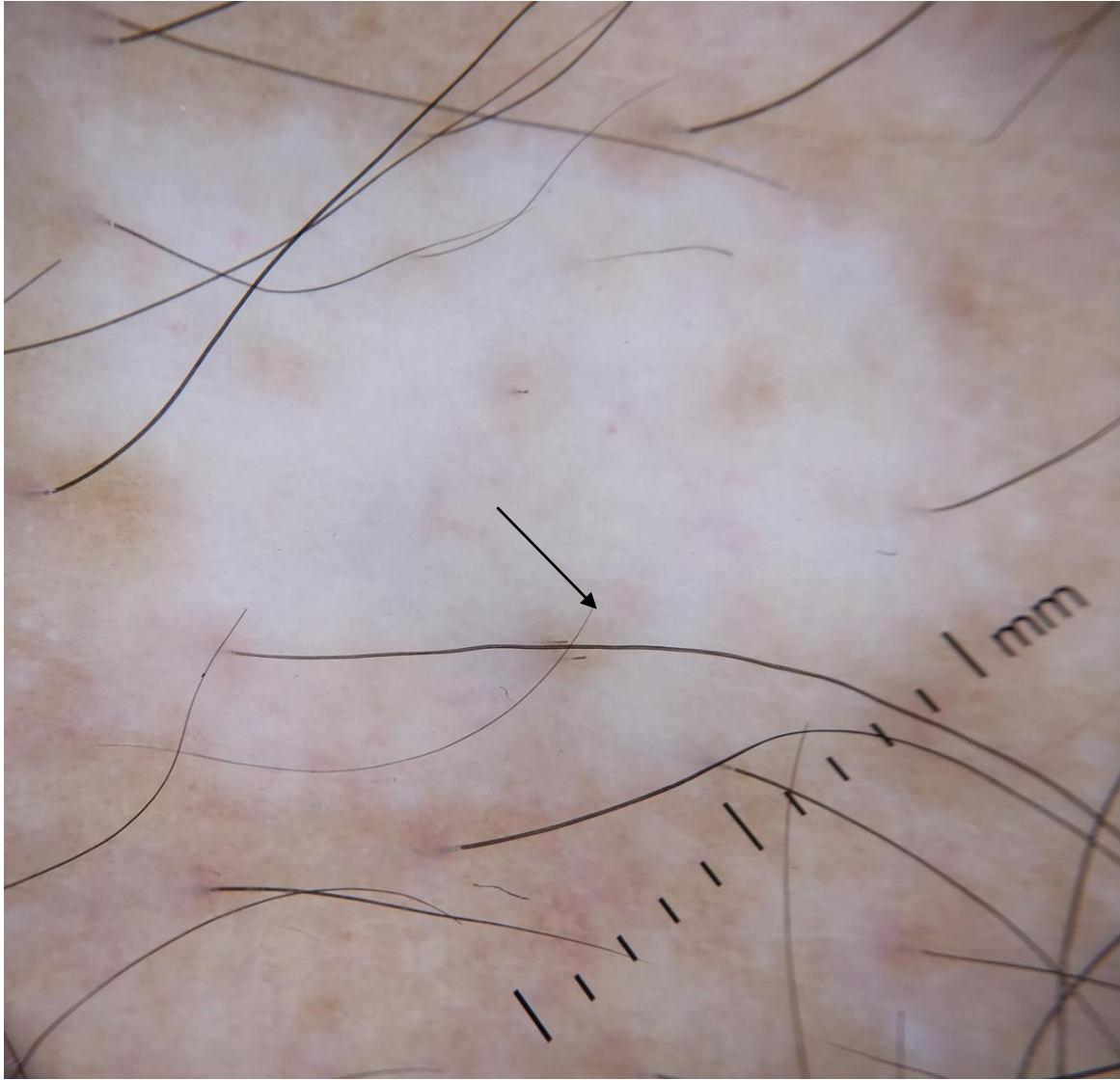
**Figure 1:** whitish areas



**Figure 2:** Starburst appearance



**Figure 3 (a,b):** Comet tail appearance



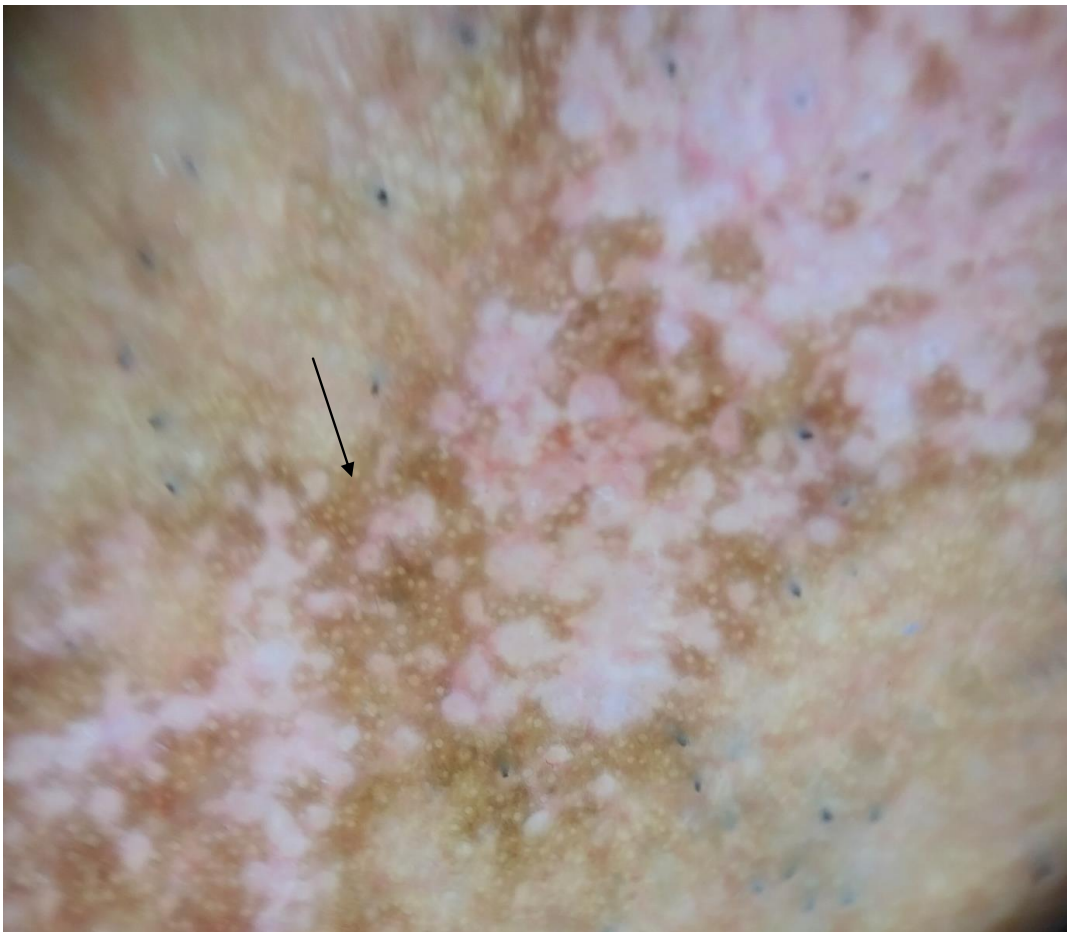
**Figure 4:** Perifollicular pigmentation



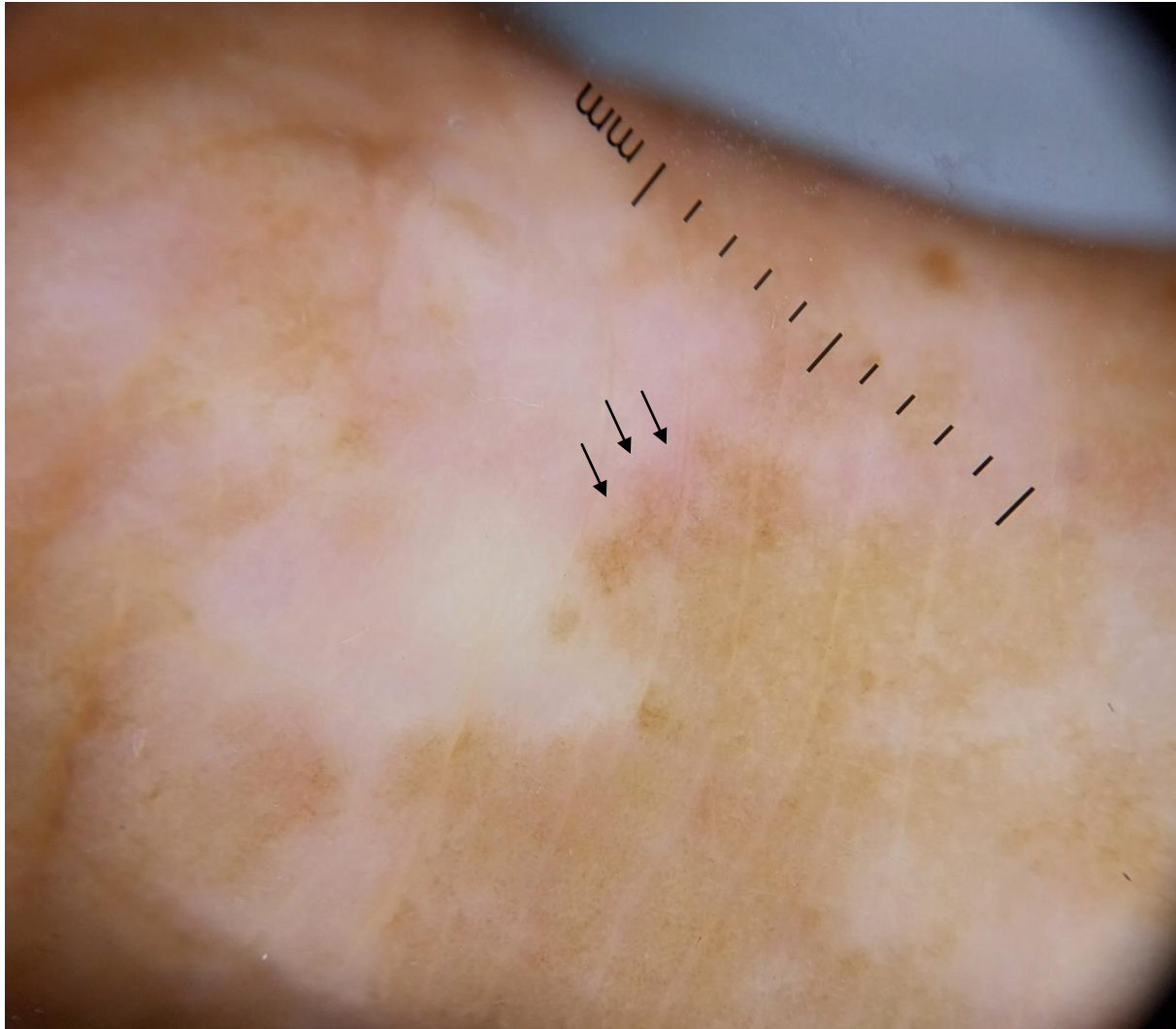
**Figure 5:** leukotrichia



**Figure 6:** Perilesional erythema. Telangiectasias



**Figure 7:** Perilesional hyperpigmentation



**Figure 8:** Trichrome appearance

#### 4. Discussion

Vitiligo is an acquired, idiopathic disease secondary to a melanocyte destruction. It is a slow process resulting in a progressive decrease in melanocyte numbers [2]. Dermoscopy is an emerging tool in differentiating evolving vitiligo from other hypopigmentary disorders, evaluating response to therapy, and assessing vitiligo activity [3]. Dermoscopy also provides guidance in selecting patients for surgical intervention [4]. It is a cost-effective and easily applicable instrument based on transillumination of a vitiligo lesion to investigate with high magnification (usually 10-fold) to visualize subtle colors, features, and microstructures in epidermis and papillary dermis [5]. In vitiligo, the most useful dermoscopic clues are observed in the perifollicular region. The other dermoscopic features studied are altered pigmentary network, intra-lesional, perilesional,

and the presence of specific features. Dermoscopic features of unstable or progressive vitiligo are perifollicular pigmentation, reduced or absent pigment network, trichromic aspect, comet tail and starburst appearance, micro-koebner phenomenon and leukotrichia [6]. The tapioca sago or satellite lesions is a dermoscopic feature observed in younger patients, and some authors associate it with instability and early stages of the disease [7]. While perifollicular depigmentation, perilesional and marginal hyperpigmentation, intra and perilesional erythema, telangiectasias and atrophy are the main dermoscopic features of stable and pigmentary vitiligo [6]. Recently, novel UV-dermoscopy, a combination of UV, dermoscopy and photoelectric sensor and HDMI HD video data line, shows effectiveness in early diagnosis, activity assessment, and treatment effect evaluation of vitiligo [8].

Dermoscopic features	Findings of previous studies	Findings of our study
Perifollicular pigmentation	Repigmenting and progressive disease (11), (6)	Progressive disease
Perifollicular depigmentation	Stable disease (1),(6)	Stable and repigmenting disease
Starburst	Progressive disease (1),(6)	Progressive disease
Comet tail	Progressive disease (1), (6)	Progressive disease
Trichromic	Progressive disease (9) , (10),(11), (6)	Progressive disease
Leukotrichia	Progressive disease (6), (14) ,(15)	Progressive disease
Intra/ perilesional erythema	Stable and repigmenting disease (1), (6)	Stable and repigmenting disease
Telangiectasias	Stable and repigmenting disease (1), (6)	Stable and repigmenting disease
Perilesional hyperpigmentation	Repigmenting disease (6),(12) ,(13)	Stable and repigmenting disease

**Table 2: Comparison of dermoscopic findings of our study and previous studies**

## 5. Conclusion

Dermoscopy is an advantageous , non invasive, accessible tool in evaluating vitiligo activity and monitoring patients under treatment [9-15].

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