Original Case Series

Journal Of Clinical & Medical Images Case Reports

Open Access, Volume - 2

Scalp involvement in Dermatomyositis

S Elloudi*; FZ Hashas; H Bay Bay; Z Douhi; FZ Mernissi

[*]Department of Dermatology and Venereology, University Hospital Hassan II, Route Sidi Hrazem, Faculty of Medicine and Pharmacy, Sidi Mohamed Ben Abdellah University, Fez, Morocco.

Received Date : Mar 25, 2022
Accepted Date : Apr 21, 2022
Published Date : May 07, 2022
Archived : www.jcmimagescasereports.org

***Corresponding Author:** Elloudi S, Department of Dermatology and Venereology, University Hospital Hassan II, Route Sidi Hrazem, Faculty of Medicine and Pharmacy, Sidi Mohamed Ben Abdellah University, Fez, Morocco. Tel : +212 667410849
Email: dr.elloudi@gmail.com

Abstract

Introduction: Scalp involvement is common in patients with dermatomyositis (DM), however it is an understudied manifestation that has been poorly described.

Objectives: The aim of this study was to determine the frequency and to characterize clinical and dermoscopic features of scalp involvement in patients diagnosed with DM.

Methods: We performed a descriptive retro-prospective observational study that included all patients diagnosed with DM in dermatology department over 10 years from 2011 to 2021.

Results: Of 36 patients with the diagnosis of dermatomyositis, scalp involvement was present in 22. it was clinically characterized by pruritus ,erythema , scales and alopecia in most cases, others founding included poikiloderma and excoriation. 14 patients were evaluated by trichoscopy, the most common findings included erythema, peri and inter follicular scales, vascular structures as: telangiectasia, enlarged and irregular capillaries, arborizing vessels and vascular lake-like structures. Pigmented structures as halo peri follicular pigmentation and pigmented air inter follicular. The most common pattern was: mixted (vascular and pigmented) 57,14 % ,vascular 35,71 % and pigmented 7,14 % pattern. Dermoscopy of the proximal nail fold showed enlarged and tortuous capillaries in 91,66% ,also close similarities between nail fold and scalp capillary changes were found.

Conclusions: Recognition of clinical and dermoscopic features of scalp dermatomyositis (SDM) is very important and must be directly evaluated in patients with DM.

Keywords: Dermatomyositis; scalp dermatomyositis; trichoscopy; capillaroscopy.

Introduction

Dermatomyositis (DM) is an autoimmune disease included in the inflammatory myopathies whose symptoms can be cutaneous, muscular, or systemic, and it can affect adults and children [1]. Scalp involvement is common in patients with DM, however it is an understudied manifestation that has been poorly described. The aim of this study was to determine the frequency and clinical and dermoscopic features of scalp involvement in patients diagnosed with DM.

Methods

We performed a descriptive retro-prospective observational study that included all patients diagnosed with DM in our dermatology department at University Hospital Center HASSAN II Fez in Morocco over 10 years from 2011 to 2021. Trichoscopic and dermoscopy of the proximal nail fold images were obtained using a digital microscopy system (DermLite Foto © [3Gen USA]).

Results

22 out of 36 patients with DM had scalp involvement at clinical examination (Figure 1), with a prevalence of 58.33 % and a clear predominance of women 30 patients versus 6.

Those patients with scalp involvement were diagnosed as classic dermatomyositis in 72,72 %, paraneoplastic dermatomyositis in 18,18%, juvenile dermatomyositis in 4,54 %, and mixed

Citation: S Elloudi. Scalp involvement in Dermatomyositis. J Clin Med Img Case Rep. 2022; 2(3): 1137.

connective tissue disease in 4,54 %. Scalp dermatomyositis (SDM) was clinically characterized by pruritus in 15 (68,18%) patients, erythema in 19 (86,36%) patients, scales (as erythemato-squamous plaques) in 9 (40,90%) patients, alopecia 68,18 % , diffuse alopecia in 6 (27.27%) patients and patchy alopecia in 9 (40,90%) patients with a positive traction sign in 7 (%) patients, poikiloderma of the scalp in 4 (18,18%) patients and excoriation in 7 (31,81%) patients. No patient presented with ulceration or calcinosis, and no patient presented isolated scalp involvement. 14 patients were evaluated by dermoscopy of the proximal nail (**Table 1**), scleroderma pattern was found in 91,66 of the cases: late pattern in 9 patients, active pattern in 3 and early pattern in one-, and by trichoscopy apart from any associated pathology of scalp. The most common trichoscopic findings included: Erythema in all patients, peri and inter follicular scales in 12 cases (85.71%) (**Figure 2**), vascular structures as (**Figure 3**): telangiectasia found in 12 patients (85.71%),enlarged and irregular capillaries found in 10 (71.42%) cases, arborizing vessels in one patient (7.14%) and vascular lake-like structures in 6 patient (42.85%). Pigmented structures as hallo Peri follicular pigmentation and pigmented air inter follicular in 9 (64,28 %) cases (**Figure 4**). Hair damage in 12 (85.71%) patients as cadaveric hairs, vellus hairs, coiled hairs. Other findings included: rosettes in one patient and chrysalis structures and keratin plugs in 3 patients. The most common patterns was : mixted (vascular and pigmented) 57,14 % ,vascular 35,71 %, and pigmented 7,14 %. Dermoscopy of the proximal nail fold showed enlarged and tortuous capillaries in (91,66%), close similarities were found between the vascular pattern of the proximal nail fold and that of the scalp DM (**Figure 5**).

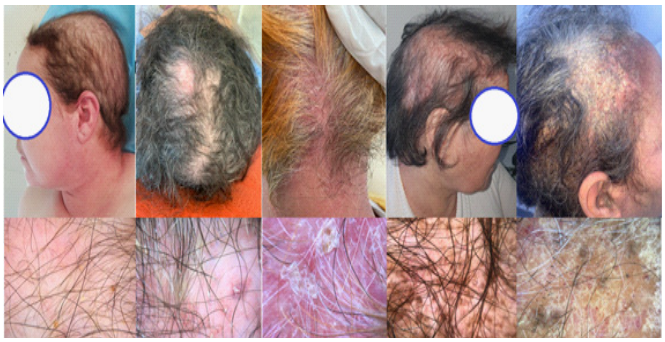

Figure 1: *Scalp dermatomyositis. clinical and trichoscopic features.*

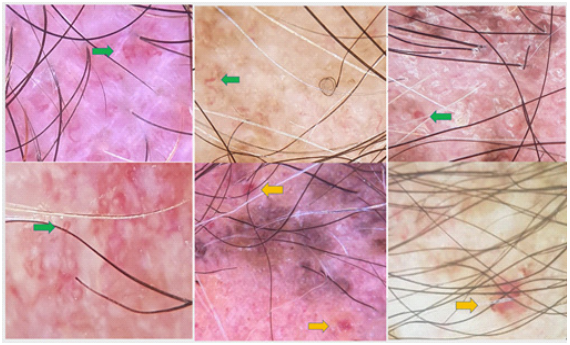

Figure 2: *Scalp dermatomyositis. Major trichoscopic features. Peri and interpilar scals.*

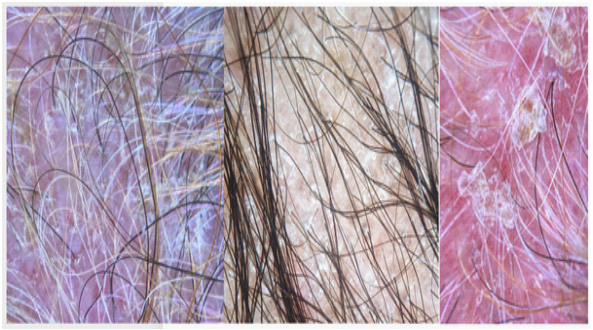

Figure 3: *Scalp dermatomyositis. Major trichoscopic features. vascular modification: vascular, lake-like structures (yellow arrows). enlarged, irregular and tortuous capillaries(green arrows).*

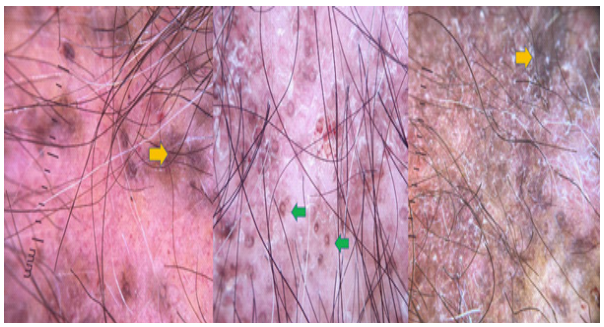

Figure 4: *Scalp dermatomyositis. Major trichoscopic features. Peri and interpilar pigmentation.*

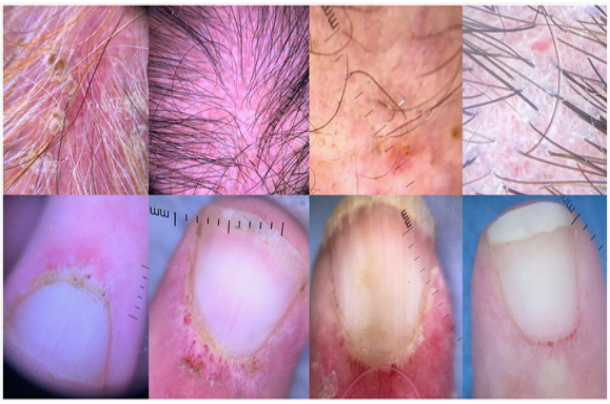

Figure 5: *Trichoscopic and capillaroscopic correlation.*

Discussion

Dermatomyositis is an autoimmune disease included in the inflammatory myopathy whose symptoms can be cutaneous, muscular, or systemic. It comprises an heterogenous clinical spectrum [2]. Scalp involvement in DM is rarely rapported in the literature, the first study on clinical features of SDM was published by Kasteler and Callen [3] in 1994. They described scalp involvement in 14 out of 17 patients with DM, defining SDM as diffuse erythematous and scaly plaques in addition to scalp poikiloderma and alopecia which was severe and nonscarring. In 2009, Tilstra et al. [4] published a series of 24 patients with DM that included 15 patients with scalp involvement, among them 5 patients with nonscarring alopecia. In our study, SDM was clinically characterized by pruritus, erythema, plaques erythemato-squamous, diffuse alopecia and patchy alopecia, poikiloderma of the scalp. The only study on

patient	age	duration of disease	Erythema	Vascularisation	peri and inter follicular scales	pigmentation	Hair modification	alopecia	rosette	chrysalis structures	keratin plugs	pattern	Nailfold Capillaroscopy Patterns
1	31	2 years	Yes +/-	-telangiectasia,	yes	Yes+	-vellus hair -emergence of a single hair per orifice	no	no	no	no	pigmented	late
2	37	2 years	Yes +/-	-telangiectasia,	yes	Yes+/-	-dystrophic hair -emergence of a single hair per orifice	yes	no	no	no	mixte	late
3	56	8 years	Yes++	-enlarged , irregular and tortuous capillaries -vascular lake-like	yes	Yes++	-dystrophic hair -emergence of a single hair per orifice	yes	no	no	no	mixte	late
4	61	8 years	Yes++	-telangiectasia -enlarged , irregular and tortuous capillaries -vascular lake-like	yes	Yes++	- vellus hair -dystrophic hair -emergence of a single hair per orifice	yes	yes	no	no	mixte	late
5	51	5 years	Yes+	-enlarged , irregular capillaries	yes	no	no	no	no	no	no	vascular	late
6	74	6 months	Yes++	-telangiectasia -arborizing vessels -enlarged , irregular and tortuous capillaries	yes	no	-dystrophic hair -emergence of a single hair per orifice	yes	no	yes	yes	vascular	active
7	36	2 years	Yes+/-	-telangiectasia -enlarged , irregular capillaries	Yes -	no	-emergence of a single hair per orifice	yes	no	no	no	vascular	late
8	79	3 years	Yes+	-telangiectasia - irregular and thin capillaries	yes	Yes+/-	-dystrophic hair -emergence of a single hair per orifice -anisotrichia	yes	no	no	no	mixte vascular	early

9	47	2 years	Yes+	- telangiectasia	no	Yes+/-	-dystrophic hair -vellus hair -emergence of a single hair per orifice -aniso-trichia	yes	no	no	no	mixte	normal
10	47	1 years	Yes+	-telangiectasia - irregular and tortuous capillaries -vascular lake-like	yes	Yes+	-dystrophic hair -emergence of a single hair per orifice -vellus hair	yes	no	no	no	mixte	active
11	61	3 months	Yes++	-telangiectasia - -enlarged and irregular capillaries -vascular lake-like	yes	no	-no	no	no	yes	yes	vascular	late
12	39	4 years	Yes++	-telangiectasia	no	Yes +/-	- dystrophic hair -emergence of a single hair per orifice	no	no	no	no	mixte vascular	late
13	23	10 years	Yes++	-telangiectasia - -enlarged and irregular capillaries -vascular lake-like	yes	no	-emergence of a single hair per orifice -vellus hair	no	no	yes	no	vascular	active
14	37	9 years	Yes++	-telangiectasia - -enlarged and irregular capillaries -vascular lake-like	yes	yes	-dystrophic hair -emergence of a single hair per orifice -vellus hair	no	no	no	yes	mixte	late

trichoscopy features of scalp dermatomyositis was published by Julio C. Jasso-Olivares in 2017[5], they described scalp involvement in 31patients with DM, Twenty-eight patients were evaluated by trichoscopy, the most consistent finding was the presence of enlarged capillaries, found in 20 (71.4%) cases, followed by peripilar casts (57.1%) and tufting and interfollicular scales in 14 (50%) cases.

Conclusion

Clinical and dermoscopic features of scalp dermatomyositis must be known and directly evaluated and compared with Proximal nail fold capillaroscopy in patients with dermatomyositis (DM).

Conflict of interest: None.

References

1. Sontheimer R: Dermatomyositis: an overview of recent progress with emphasis on dermatologic aspects. Dermatol Clin. 2002; 20(3):387-408. [PMID: 12170874]

2. Volc-Platzer B. Update: Dermatomyositis [Update: dermatomyositis]. Hautarzt. 2010; 61(1):69-78. [PMID: 20091390].

3. Kasteler JS, Callen JP. Scalp involvement in dermatomyositis: often overlooked or misdi- agnosed. JAMA. 1994; 272(24):1939-1941. [PMID: 7990247].

4. Tilstra JS, Prevost N, Khera P: Scalp dermatomyositis revisited. Arch Dermatol. 2009; 145(9):1062-1063. [PMID: 19770456].

5. Julio C. Jasso-Olivares Clinical and Dermoscopic Features of the Scalp in 31 Patients with Dermatomyositis Skin Appendage Disord. 2017; 3(3):119-124. [PMID: 28879187].