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Diagnostic value of trichoscopic findings of hair and scalp in dissecting cellulitis: case report and review of the literature

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Abstract

Dissecting cellulitis of the scalp (DCS) is an infrequent, chronic inflammatory scalp condition that predominantly affects hair follicles and results in scarring alopecia if untreated. The pathogenesis remains poorly documented and challenging to diagnose. This case highlights the value of trichoscopy as a non-invasive imaging technique in the diagnosis of DCS. We report the case of a 28-year-old female with a one-year history of worsening scalp lesions and hair loss. Examination revealed hairless nodules of the scalp, associated with exudation and pigmentation. Trichoscopy revealed significant findings, including yellow dots, broken hairs, black dots, and features associated with primary scarring alopecia, such as white dots, tufted hairs, and perifollicular pustules. Trichoscopy demonstrates significant potential for early diagnosis and intervention, aiding in the prevention of disease progression and reducing the need for invasive procedures such as biopsies. It allows for the detection of characteristic patterns, facilitating differentiation from other types of alopecia. This case shows the importance of this non-invasive tool for the early diagnosis and treatment of DCS.

Key words: dissecting cellulitis; trichoscopy; non-invasive; case report.

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Introduction

Hair loss has a significant impact on the self-image and psychological well-being of both men and women. Therefore, it is crucial not to overlook the psychological burden of hair loss, particularly in women.[1] Dissecting cellulitis of the scalp (DCS), a rare chronic disorder of the hair and scalp, has

been considered, along with acne conglobata, hidradenitis suppurativa, and pilonidal cysts, as a part of the follicular occlusive triad or tetrad. Historically, in 1903, Spritzer described for the first time the *folliculitis et perifolliculitis capitis abscess et suffices* disease, which was then renamed by Hoffmann in 1908.[2,3] It has also been identified as neutrophilic scarring alopecia of unknown origin.[4]

DCS was mainly affecting young men of African descent, but now it is widespread, according to recent literature.[3,5] DCS is a chronic inflammatory disease with multiple relapses and remission, clinically characterized by the formation of pustules, nodules, and abscesses. Currently, the pathogenesis behind DCS is poorly defined. However, it is thought that follicular occlusion due to hyperkeratosis leads to further obstruction and accumulation of keratin in the hair follicles. If left untreated, the condition can worsen, potentially leading to secondary bacterial infections – most commonly caused by *Staphylococcus aureus* and *Staphylococcus epidermidis* – which are key drivers of the neutrophil chemotaxis observed in histopathological examinations.

In the remission phase of the disease, scars may persist in the form of atrophic, hypertrophic, or keloidal scars, leading to irreversible alopecia due to a defect in the structure of hair follicles. DCS is diagnosed clinically with invasive procedures such as biochemical tests, peripheral blood count, and scalp biopsy for histopathological laboratory tests. In addition, non-invasive techniques such as trichoscopes are used to monitor the disease progress and the response to treatment.[2,3] The main treatment methods for DCS are oral antibiotics and oral isotretinoin.[4]

Trichoscopy is a practical, helpful, and non-invasive technique that allows magnified visualization of the hair and scalp.[6,7] Trichoscopy findings are considered nonspecific for diagnosing.[3] However, a study conducted in 2019 found that trichoscopy's diagnostic accuracy increases in association with good clinical evaluation, leading to earlier diagnosis of the disease.[8] In addition to presenting this case, we conducted a narrative literature review by searching PubMed and Google Scholar using the terms "dissecting cellulitis" and "trichoscopy" to summarize previously reported trichoscopic findings. Therefore, this current study aims to raise the value of non-invasive techniques to demonstrate the diagnostic value of trichoscopy findings in DCS.

Case Report

A 28-year-old female patient, with no medical history of any significant conditions, and Fitzpatrick phototype VI, presented with scalp lesions and hair loss that have been progressively worsening over the past year. The lesions initially presented as a solitary nodular mass with normal skin color and localized hair loss. Over time, they have become multiple, hairless, and exudative, with the patient reportedly neglecting the prescribed treatment.

The patient's condition has been marked by periods of remission and relapse, with the lesions worsening over time. In addition to scalp issues, the patient experienced joint pain in the knees, shoulders, and lower back, not related to movement. Despite these symptoms, no fever, fatigue, weight loss, or appetite loss were reported, as well as no photophobia or myalgia. On scalp examination, there were two hairless, boggy nodules measuring approximately 3×2 cm located over the vertex. The nodules were hyperpigmented relative to the surrounding skin, non-erythematous, and non-tender (Figure 1).

Under the trichoscopy of the scalp lesion, significant follicular features of DCS were observed, including yellow dots, broken hair, and black dots. In addition, there are other features associated with primary scarring alopecia, such as tufted hairs, peripillar white halo, peripillar fibrotic white dots and white patches, peripillar scaling and tubular cast, and perifollicular pustules (Figure 2 A, B).

Histopathological or microbiological confirmation was not performed in this case, which represents a limitation. Therefore, the diagnosis of dissecting cellulitis was made based on the characteristic clinical and trichoscopic features.

Discussion

DCS is a chronic, inflammatory condition characterized by the formation of painful abscesses, nodules, and eventually scarring alopecia. The disease often presents with multiple episodes of relapse and remission, as demonstrated in our patient. Early lesions typically start as painful nodules or pustules that can progress to form interconnected sinuses, leading to significant scarring and permanent hair loss if left untreated.[9] In our patient, the clinical presentation of bilateral, hairless, boggy nodules with periods of remission and relapse is consistent with the typical features of DCS.

Trichoscopy is a practical, useful, and non-invasive method that has shown great value in diagnosing a range of scalp and hair shaft disorders. In DCS, trichoscopic findings such as broken hair shafts and black dots can overlap with features seen in other types of alopecia. For example, broken hair shafts and black dots are also present in secretory forms of alopecia, such as alopecia areata and non-secretory forms, such as androgenetic alopecia, where they indicate disrupted hair growth cycles and follicular damage. These features can also appear in other forms of alopecia, reflecting similar patterns of hair follicle disruption and obstruction. Despite these overlaps, the specific presentation of these findings can aid in distinguishing DCS from other forms of alopecia.[6,10]

In DCS, the trichoscopic findings are particularly distinctive. Yellow dots are a hallmark feature, typically representing dilated follicular ostia filled with keratin, sebum, or degenerated follicular material.[7] However, in DCS, these yellow dots exhibit a unique three-dimensional or "soap bubble" appearance, which is strongly suggestive of this condition and is not observed in other scarring or

non-scarring forms of alopecia. This distinctive 3D structure is caused by the accumulation of sebum and keratin within the follicular infundibulum, creating a raised or bulging effect under trichoscopy.[11] This pattern is seen in nearly all patients during the active phase of the disease, unlike in alopecia areata, where its presence does not necessarily indicate disease activity.[10] To emphasize the trichoscopic findings, Table 1 provides a summarized collection of the available cases, highlighting the characteristic features observed in dissecting cellulitis, reinforcing the importance of these findings.[7,12-16]

The study's limitations include reliance on a single case report, making it challenging to generalize the findings. Moreover, the overlap of trichoscopy findings with other scalp and hair disorders limits specificity. The absence of histopathological confirmation and long-term follow-up data also restricts diagnostic accuracy and certainty about the consistency of trichoscopy findings. Future studies should involve larger sample sizes, include histopathological analysis alongside trichoscopy, and explore long-term changes in trichoscopy findings. This case highlights the supportive role of trichoscopy as a valuable non-invasive adjunct in the diagnosis of DCS. By identifying characteristic features, such as the unique 3D yellow dots, trichoscopy enables early and accurate diagnosis, distinguishing DCS from other forms of alopecia. This approach helps avoid more invasive diagnostic procedures, such as scalp biopsies, allowing for prompt treatment and better patient outcomes. Nevertheless, trichoscopy should not be considered a definitive replacement for histopathology, especially in atypical or doubtful cases.

Conclusions

This case spotlights the diagnostic value of trichoscopy in DCS, showing its role as a non-invasive tool for early diagnosis. Trichoscopic features such as yellow dots, broken hairs, black dots, tufted hairs, blue-grey dots, peripillar white halo, peripillar, fibrotic white dots and white patches, peripillar scaling and tubular cast, and perifollicular pustules (Figure 3) can significantly assist in differentiating DCS from other forms of alopecia, giving an alternative option to more invasive procedures like scalp biopsies. Early diagnosis and management can control the progression of DCS, reducing scarring and permanent hair loss. Further studies are necessary to explore trichoscopy's broader application in diagnosing DCS and other similar conditions. Trichoscopy provides important supportive evidence in diagnosing DCS by detecting characteristic patterns. While it should not replace histopathological confirmation when indicated, it may allow earlier recognition, guide management, and reduce the need for biopsy in straightforward cases.

References

1. Davis DS, Callender VD. Review of quality of life studies in women with alopecia. Int J Womens Dermatol 2018;4:18-22.
2. Tchernev G. Folliculitis et perifolliculitis capitis abscedens et suffodiens controlled with a combination therapy: Systemic antibiosis (Metronidazole Plus Clindamycin), dermatosurgical approach, and high-dose isotretinoin. Indian J Dermatol 2011;56:318-20.
3. Starace M, Alessandrini A, Piraccini BM. Dissecting Cellulitis. In: Hair Disorders: Diagnosis and Management, 2021;110.
4. Sun KL, Chang JM. Special types of folliculitis which should be differentiated from acne. Dermatoendocrinol 2017;9:e1356519.
5. Scheinfeld NS. A case of dissecting cellulitis and a review of the literature. Dermatol Online J 2003;9.
6. Lacarrubba F, Micali G, Tosti A. Scalp dermoscopy or trichoscopy. Curr Probl Dermatol 2015;47:21-32.
7. Tosti A, Torres F, Miteva M. Dermoscopy of early dissecting cellulitis of the scalp simulates alopecia areata. Actas Dermosifiliogr 2013;104:92-3.
8. Melo DF, Slaibi EB, Siqueira TMFM, Tortelly VD. Trichoscopy findings in dissecting cellulitis. An Bras Dermatol 2019;94:608-11.
9. Masson R, Jeong CY, Ma E, et al. Treatments for dissecting cellulitis of the scalp: a systematic review and treatment algorithm. Dermatol Ther 2023;13:2487-526.
10. Lima CD, Lemes LR, Melo DF. Yellow dots in trichoscopy: relevance, clinical significance and peculiarities. An Bras Dermatol 2017;92:724-6.
11. Warszawik OM. Trichoscopy of cicatricial alopecia. J Drugs Dermatol 2012;11:753-8.
12. Melo DF, Lemes LR, Pirmez R, Duque-Estrada B. Trichoscopic stages of dissecting cellulitis: a potential complementary tool to clinical assessment. An Bras Dermatol 2020;95:514-7.
13. Karadag Köse Ö, Güleç AT. Evaluation of a handheld dermatoscope in clinical diagnosis of primary cicatricial alopecias. Dermatol Ther 2019;9:525-35.
14. Segurado-Miravalles G, Camacho-Martínez F, Arias-Santiago S, et al. Trichoscopy of dissecting cellulitis of the scalp: exclamation mark hairs and white dots as markers of disease chronicity. J Am Acad Dermatol 2016;75:1267-8.
15. Thakur BK, Verma S, Raphael V. Clinical, trichoscopic, and histopathological features of primary cicatricial alopecias: A retrospective observational study at a tertiary care centre of North East India. Int J Trichology 2015;7:107-12.

16. Kowalska-Oledzka E, Slowinska M, Rakowska A, et al. ‘Black dots’ seen under trichoscopy are not specific for alopecia areata. Clin Exp Dermatol 2012;37:615-9.

Contributions: Khalid Basamih: conception of the work, clinical support, clinical documentation, data collection, data analysis, data interpretation, and original writing of the manuscript; Renad Althobaiti, Waad Alotaibi: data collection, data analysis, data interpretation, and original writing of the manuscript; Omnia Sulimani: design of the work, validation, data curation, manuscript writing and editing, and drawing and designing (Figure 3); Fawaz Aljehani, Aymen Alharbi: clinical support and supervision. The final draft of the manuscript was read and authorized by all authors, who also committed to taking responsibility for every part of the work.

Conflict of interest: the authors have no conflict of interest to declare.

Ethical approval and consent to participate: since this study involves a retrospective review of patient data, it did not require ethical approval under local or national guidelines. The patient provided written informed consent to participate in this study.

Consent for publication: written and verbal informed consent were obtained from the patient for the publication of their medical case details and accompanying images.

Availability of data and materials: all data produced or examined in this study are presented within this article. For any additional inquiries, please contact the corresponding author.

Figure 1. Two well-defined patches of scarring alopecia over the vertex, measuring 3×2 cm, with few follicular hairs emerging within the patches.

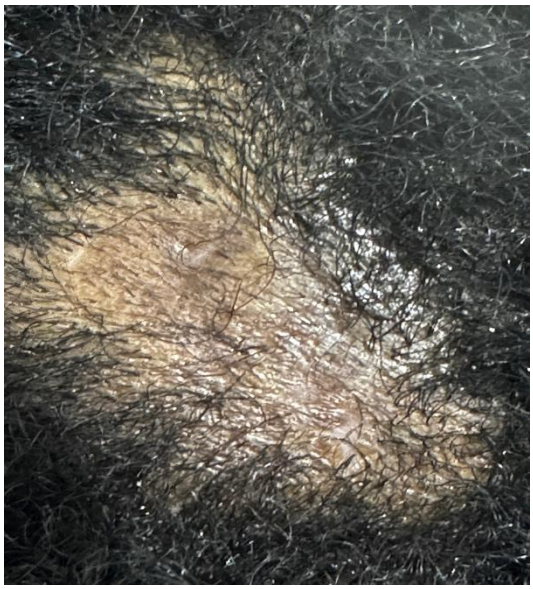

Figure 2. Trichoscopic images captured using ILLUCO IDS-1100 dermatoscope (×10 magnification, polarized mode). As a reference, the scale bars show 1 mm. Arrows indicate key trichoscopic features, color-coded according to the figure description. **A**) Trichoscopic findings of DCS patch illustrating broken hair (blue arrow), yellow dots (pink arrow), black dots (white arrow), peripillar white halo (orange arrow), tufted hairs (red arrow), and white patches (black arrow); **B**) trichoscopic findings of DCS patch showing peripillar scaling and tubular cast (blue arrow), tufted hairs (pink arrow), white patches (white arrow), black dots (red arrow), broken hair (yellow arrow), and yellow dots (purple arrow).

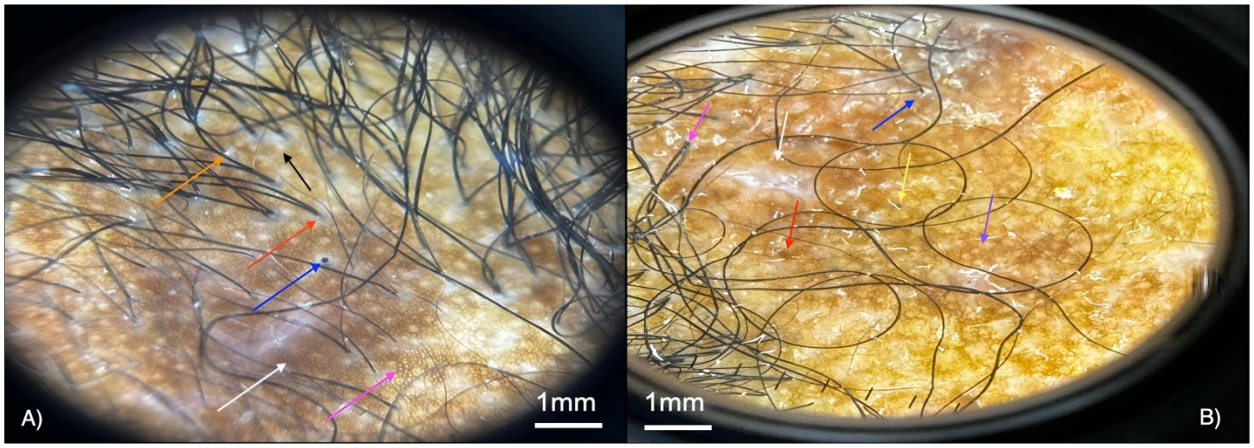

Table 1. Summary of previously documented trichoscopic findings.

First Author, year	Cases (n)	Stage	Hallmark trichoscopic findings
Melo *et al.*, 2020[12]	N/A	Early	Black dots, yellow dots, broken hairs (AA-like)
		Abscess	3D yellow dots, yellow structureless areas (lakes of pus), pinpoint vessels with whitish halo
		Fibrotic	Absent follicular openings, cutaneous clefts with emerging hairs, shiny patches
Karadag Köse *et al.*, 2019[13]	6	Active	Yellow dots, 3D yellow dots, black dots
Segurado-Miravalles *et al.*, 2016[14]	18	Mixed	Yellow dots (94%), black dots (94%), vellus hairs (83%), broken hairs (50%), red dots (44%), white dots (28%), comma hairs (22%), exclamation mark hairs (11%)
Thakur *et al.*, 2015[15]	3	N/A	Yellow dots, yellow dots with a "three-dimensional" structure, Black dots
Tosti *et al.*, 2013[7]	6	N/A	Black dots, yellow dots, red dots, empty follicular openings, and cadaverized hairs
Kowalska-Oledzka *et al.*, 2012[16]	107	N/A	Black dots

Figure 3. Illustration of the main pathological features observed on trichoscopy.