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Dissecting cellulitis of the scalp after hair transplantation: A case report

Saç ekimi sonrası dissekan selülit gelişimi: Olgu sunumu

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To Editor,

A 28-year-old male presented to our clinic due to abscess and fistula formations on the scalp (Figure 1a). He had hair transplantation (HT) for androgenetic alopecia five months earlier. HT was done with the follicular unit extraction (FUE) technique on the frontal, centroparietal, and vertex areas. His complaints began as numerous inflammatory nodules on the recipient site within the first two weeks of HT and continued with a discharge of purulent material, accompanied by a foul odor and hair loss. While he had a history of moderate acne during adolescence, there was no other history of predisposing disease (hidradenitis suppurativa, pilonidal sinus) or family history, and he shows no signs of these diseases during physical examination. He had received systemic and intralesional steroids, clindamycin injections, and various systemic antibiotics for four months at another center. Although he benefited at first, his complaints reoccurred shortly after treatment discontinuation, always staying limited to the recipient site. We performed several tests after his admission to our clinic, including bacterial and fungal cultures, tomography, and a skin biopsy from the lesional scalp. On tomography, we observed areas of exophytic nodular soft tissue and linear fluid formations, both with peripheral contrast enhancement. Histopathology revealed perifollicular lymphohistiocytic and mixed inflammation, particularly affecting the lower half of the dermis and destroying follicles (Figure 2a, b). He was diagnosed with dissecting cellulitis of the scalp (DCS), and rifampicin 600 mg/day + clindamycin 600 mg/day was started. After 3 months of treatment, we observed no inflammatory papule or nodule (Figure 1b). The treatment was then switched to isotretinoin 20 mg/day, and he has remained in remission during follow-up for 6 months (Figure 1c). Bleeding, edema, surgery-related infections, enlarged scar areas, chronic folliculitis, and non-cosmetic results are some of the major complications of HT[1]. Because of its dense circulation, the scalp is a relatively protected area for infections; as a result, it provides relative resistance to infectious problems[2]. Salanitri et al.'s[1] study observed

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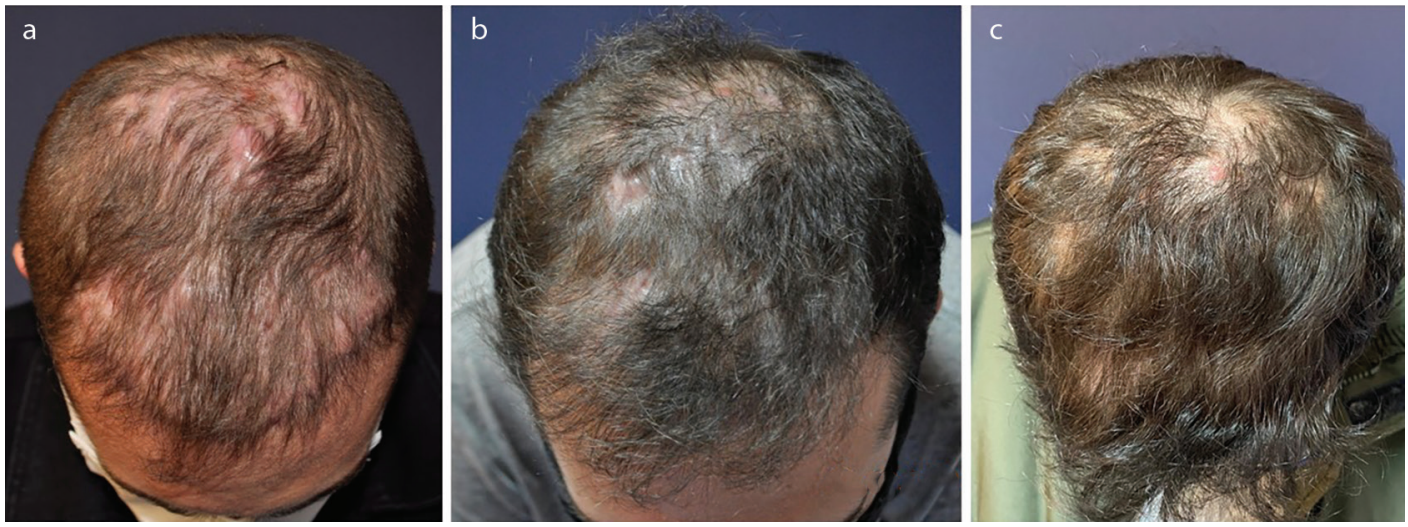

Figure 1. (a) Parietal and vertex areas of the scalp with numerous fluctuating nodules, sensitive abscess, and fistula formations with purulent discharge in the transplantation area of the scalp during the first admission to our hair unit. **(b)** After 3 months of systemic clindamycin + rifampicin, regression was observed in fluctuant nodules and abscess formations. **(c)** Continuing clinical remission after 5 months of isotretinoin 20 mg/day

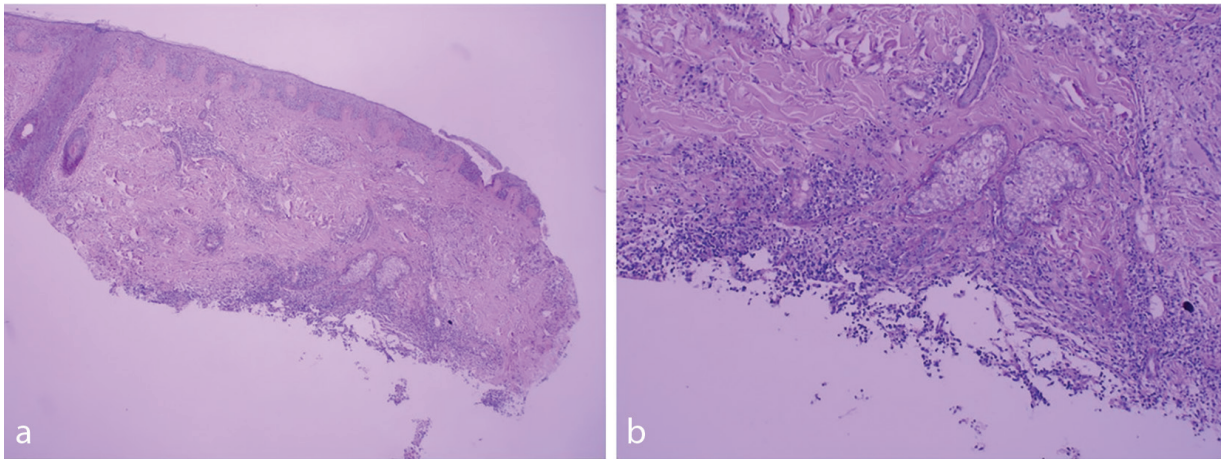

Figure 2. (a) Histopathology revealed perifollicular mixed neutrophilic and lymphohistiocytic inflammation and infiltration, especially affecting the lower half of the dermis, and destroyed follicles by this inflammation (H&E, x40). **(b)** Close view of mixed inflammation affecting the lower half of the dermis (H&E, x200)

H&E: Hematoxylin and eosin

complications in 4.7% of patients, despite serious infections occurring in less than 1%[3]. Recipient site infections usually present with localized papules and pustules[1,3]. However, after HT, there have also been reports of deep fungal and mycobacterial infections, as well as osteomyelitis[1,4]. These infections are believed to arise from problems directly related to the factors controlled by surgeons and/or by the patients[2]. Suggested factors include poor hygiene, excessive crust formation, a preexisting medical risk factor, high-tension closure, and circulatory problems at the donor site. Taking out follicular units by hand and putting them back in the wrong way could raise the risk of follicular occlusion and bacterial growth by affecting the immune system and changing the microbiota on the scalp in people who are already more likely to get follicular occlusion[2,5].

Only recently has the literature reported the development of DCS after HT. Genco et al.[5] recently published a case report similar to ours, in which nodulocystic lesions appeared two months after a FUE HT. He had no previous history of scalp folliculitis before the surgery, as was our case, and he had these fluctuating cysts and fistulas for the last 10 years until they diagnosed him with DCS. While the exact cause of this rare complication remains unknown, it has been suggested that post-surgery microbial or inflammatory changes resulting from the mechanical extraction of follicular units may have triggered the underlying pathological abnormality that led to the emergence of DCS. Despite the observation of scar development and reactivation of scarring alopecia after HT, our patient had no history of scalp or predisposing disease prior to surgery. After the diagnosis of DCS, we achieved complete remission with systemic rifampicin + clindamycin, and we maintained a satisfactory remission with low-dose isotretinoin during follow-up. The clinical presentation (fluctuating and communicating lesions), disease course, and symptomatology of our patient, along with the response to the agents used in the treatment of DC, also strengthens the diagnosis. Oral antibiotics were previously considered

as first-line therapy for less severe cases of dissecting cellulitis owing to their milder side-effect profile[6,7]. However, a recently published review recommended isotretinoin as first-line treatment after it produced a significant response in 54% of patients, despite its use in 53% of cases. Furthermore, a recent meta-analysis found it to be highly effective in DC[5,8]. However, because of the high recurrence, follow-up is required[6,8].
To conclude, better documentation of the patients with HT would help to recognize rare complications, which would eventually guide clinicians in the treatment and management of such conditions.
Written informed consent in line with the Declaration of Helsinski was obtained from the patient for publication of this case report, for all information and regarding the use of clinical photographs in print.

Ethics

Informed Consent: Written informed consent in line was obtained.

Authorship Contributions

Surgical and Medical Practices: A.B., C.İ.B., Concept: A.B., Ö.D., A.A., Design: A.B., Ö.D., A.A., Data Collection or Processing: A.B., C.İ.B., Analysis or Interpretation: A.B., Ö.D., C.İ.B., A.A., Literature Search: A.B., Writing: A.B., A.A.

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References

1. Salanitri S, Gonçalves AJ, Helene A Jr, Lopes FH: Surgical complications in hair transplantation: a series of 533 procedures. Aesthet Surg J. 2009;29:72-6.
2. Konior RJ: Complications in hair-restoration surgery. Facial Plast Surg Clin North Am. 2013;21:505-20.
3. Farjo N: Infection control and policy development in hair restoration. International Society of Hair Restoration Surgery. 2008;18:141-4.
4. Jones JW, Ignelzi RJ, Frank DH, Blackock JB: Osteomyelitis of the skull following scalp reduction and hair plug transplantation. Ann Plast Surg. 1980;5:480-2.
5. Genco L, Cantelli M, Delfino M, Noto M, Fabbrocini G, Vastarella M: Perifolliculitis capitis abscedens et suffodiens after follicular unit transplantation: A Case Report. Skin Appendage Disord. 2023;9:73-5.
6. 6Guo W, Zhu C, Stevens G, Silverstein D: Analyzing the efficacy of ısotretinoin in treating dissecting cellulitis: A literature review and meta-analysis. Drugs R D. 2021;21:29-37.
7. Lee CN, Chen W, Hsu CK, Weng TT, Lee JY, Yang CC: Dissecting folliculitis (dissecting cellulitis) of the scalp: a 66-patient case series and proposal of classification. J Dtsch Dermatol Ges. 2018;16:1219-26.
8. Thomas J, Aguh C: Approach to treatment of refractory dissecting cellulitis of the scalp: a systematic review. J Dermatolog Treat. 2021;32:144-9.