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Entrapped Hair Causing Impaired Wound Healing at a PDO Thread Entry Site: A Preventable Aesthetic Complication

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1. Abstract

Thread lifting is widely used in aesthetic medicine, and complications are generally minor. Impaired wound healing caused by patient's hair acting as a retained foreign body, however, is rarely reported. A 38-year-old woman presented with persistent discomfort and delayed healing at a preauricular entry site two months after undergoing a PDO thread lifting performed elsewhere. Examination revealed a small open wound containing multiple stands of her own hair, which had entered the tract and contributed to chronic irritation.

The wound was gently extended under local anaesthesia, the hair was removed, and the site was thoroughly irrigated. Symptoms resolved immediately following foreign-body removal. The wound healed completely without scarring within ten days. This case highlights an uncommon but preventable complication of thread lifting and emphasise the importance of proper hair control, careful placement near hair-bearing areas, and thorough inspection of entry points during and after the procedure.

2. Introduction

Thread lifting has become increasingly popular in aesthetic dermatology due to its minimally invasive nature and ability to provide subtle lifting and contouring. Although complications are generally mild and self-limiting, impaired wound healing at thread entry sites can occur unaddressed may be related to improper technique, anatomical considerations, or inadequate site preparation. Entrapped hair functioning as a retained foreign body is rarely described in the literature despite being clinically important and preventable. This case report describes an unusual presentation of delayed healing caused by hair entrapment at a preauricular PDO thread entry site, highlighting the need for careful inspection and technique in thread procedures.

3. Case Presentation

A 38-year-old woman (Fitzpatrick skin type IV) presented with a two-month history of discomfort at a preauricular entry point following a PDO thread lift performed at another clinic. Immediately after her procedure, she was prescribed azithromycin 500 mg once daily for five days as part of the clinic's routine post-operative regimen.

Approximately two weeks later, she began experiencing mild oozing and increasing discomfort at the same entry site. She contacted her original provider and was subsequently prescribed amoxicillin-clavulanate 1 g twice daily for seven days. Although the oozing improved, the area remained tender, and she reported a persistent pulling sensation whenever she brushed or touched her hair. These symptoms continued for several weeks until she sought further evaluation at our clinic.

On examination, a small preauricular opening was present with a visible hair shaft protruding from the wound. The surrounding skin demonstrated mild inflammation without warmth, fluctuance, or abscess formation. The findings were consistent with entrapped hair functioning as a retained foreign body rather than infection.

Under local anaesthesia, the wounds was gently extended by approximately 2 mm vertically and horizontally to access the tract. Multiple embedded hair strands were carefully removed until the wound was completely clear. No purulence was identified. Only simple wound care was advised, and no additional antibiotics were prescribed.

At the three-day follow-up, the wound showed marked improvement with resolution of tenderness. By ten days, full re-epithelialization had occurred without scarring or recurrence.

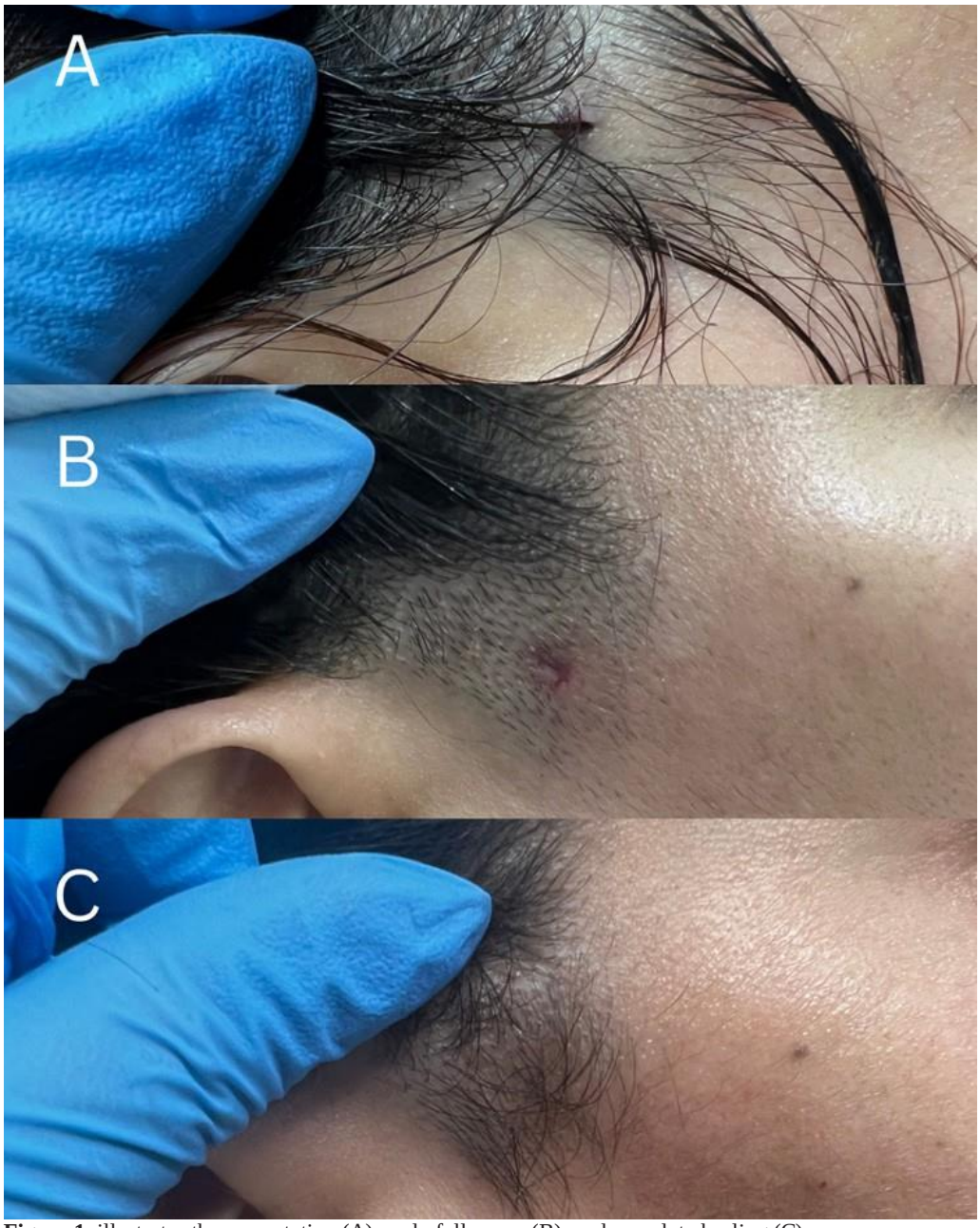

Figure 1: illustrates the presentation (A), early follow-up (B), and complete healing (C).

4. Discussion

Thread lifting has become an increasingly common minimally invasive technique for facial rejuvenation, with most reported complications being transient and minor [1]. Entry-site issues such as erythema, bruising, and dimpling are well described; however, delayed wound healing related to mechanical obstruction is rarely highlighted. Hair entrapment functioning as a retained foreign body is particularly underreported, despite being a plausible and preventable event when entry points are placed close to hair-bearing regions [2].

This case demonstrates how prolonged discomfort and localised inflammation can be misinterpreted as infection, leading to unnecessary antibiotic use. The patient received two courses of antibiotics from her original provider, yet symptoms persisted because the underlying cause was mechanical rather than infectious. Recognising this distinction is clinically important, as foreign body-related irritation typically presents with mild, localised findings without warmth, fluctuance, or systemic signs [3]. A high index of suspicion is needed when symptoms do not improve as expected or when patients describe a “pulling” sensation, which may indicate trapped hair interacting with the wound tract.

Technical factors likely contributed to this complication. Entry points placed within or directly adjacent to dense hair-bearing areas increase the risk of hair being introduced during needle passage. Simple preventive

strategies such as clearing the immediate area of hair, using a parted-hair technique, or placing entry points slightly exterior to the hairline, could reduce the risk significantly [4]. Additionally, early post-procedural inspection of entry sites can allow prompt removal of any debris or hair before it becomes embedded [5].

Management of such cases is straightforward when the diagnosis is recognised. Gentle wound enlargement and mechanical removal of the entrapped hair usually result in rapid symptom resolution, as seen in this patient. Importantly, once the foreign material is removed, healing progresses quickly without the

need for further intervention or antimicrobial therapy [6,7,8].

Reports describing hair entrapment as a cause of impaired healing after PDO thread procedures are scarce [2,9]. Increasing awareness of this avoidable complication may improve diagnostic accuracy, reduce inappropriate antibiotic use, and enhance procedural safety in aesthetic practice [10].

5. Conclusions

This case underscores hair entrapment as an under recognised mechanical cause of delayed healing at PDO thread entry sites. When patients present with persistent discomfort despite antibiotic therapy and minimal signs of infection, clinicians should consider retained hair or debris within the tract. Early identification and simple mechanical removal lead to rapid and complete resolution, as demonstrated here. Increasing awareness of this preventable complication can reduce misdiagnosis, limit unnecessary antibiotic use, and support safer, more precise entry-site selection during thread procedures.

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