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TITLE: NECROTISING SOFT TISSUE INFECTION: A RARE SIDE EFFECT OF HAIR TRANSPLANT

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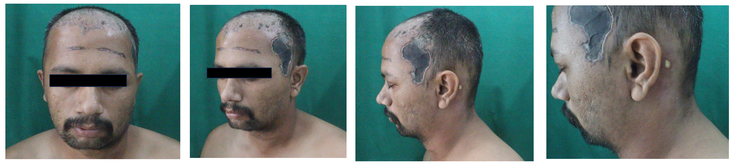
INTRODUCTION

- Serious complications arising from surgical hair restoration (SHR) are relatively uncommon, and are due to technical errors, patients' physiology or compliance errors
- Common complications include bleeding, edema, infections, folliculitis, scars, pigmentation and neuralgia. Rare complications are pyogenic granuloma, arteriovenous fistulas, herpes zoster and post-traumatic neuroma
- Necrotising soft tissue infection (NSTI) is rare life-threatening complication, with delay in diagnosis increasing the mortality

CASE REPORT

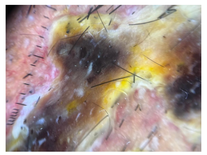
- A 32-year-old male, HCV positive, not on treatment, presented with multiple dark raised lesions over scalp since 21 days
- Patient was a/a 21 days ago, when he underwent follicular unit transplantation (FTU), 2 days after which he noticed multiple dark raised lesions over scalp with simultaneous development of swelling of eyes and neck and pus filled lesion behind left ear

Cutaneous examination (14/08/25)



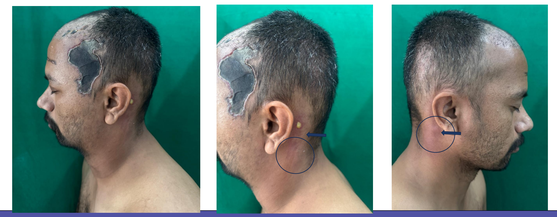
- Few well defined, irregular/oval/ linear, adherent, necrotic, depressed plaques, 9 x 5 to 1x 2 cm over frontal, left temporal scalp and mid- forehead
- Subtle ill defined erythema and edema behind both retroauricular region extending upto sides of neck
- Large, well defined, pustule with erythematous boarder on left retro auricular region
- Slight restriction on side to side neck movement

Dermoscopy



Areas of black, yellow and pale areas with peripheral telangiectasia

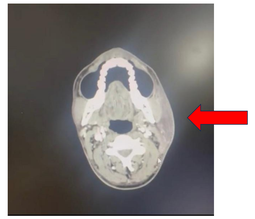
- With the DD of NSTI and scalp necrosis, he was started on broad spectrum oral and topic antibiotics but within 5 days he presented with ill-defined erythema and edema behind both retro auricular areas extending upto sides of neck with restricted neck movements



Cutaneous examination (19/08/25)

- Increase in erythema (—) and edema (◯) on both retroauricular areas with extension to sides of neck
- Persistence of adherent plaques

- Patient admitted in surgery, investigated and started on IV broad spectrum antibiotics
- Investigations revealed raised WBC (12.010 cells/microL) and on local USG enlarged lymph nodes at right Va level
- CT scan



Infective process with diffuse subgleal scalp collection and subcutaneous collection seen from left masseteric region tracking inferiorly along left sternocleidomastoid.

- Final diagnosis : Necrotising soft tissue infection following FTU

NSTI vs Scalp necrosis post hair transplant

- Onset: NSTI – Rapid (24–72 hrs)(our case); Scalp necrosis – Delayed (3–7 days)
- Pain: NSTI – Severe, disproportionate; Scalp necrosis – Mild/moderate
- Swelling/Erythema: NSTI – Diffuse, rapid(our case); Scalp necrosis – Localized, gradual
- Discharge: NSTI – Foul, purulent; Scalp necrosis – Absent/mild crust
- Progression: NSTI – Hours to days (our case); Scalp necrosis – Slow, days to weeks
- Response: NSTI – Poor without surgery; Scalp necrosis – Supportive care helps

DISCUSSION

- Prevalence rate is < 1%, associated with preexisting medical risk factors
- Insufficient blood supply to the recipient area is considered the main cause of necrosis
- It presents with dusky discoloration, crusting and eschar which detaches, leaving scars
- Investigations include local USG, CT scan, MRI (gold standard) and surgical exploration (definitive)
- Management includes surgical debridement (mainstay), IV antibiotics, supportive care and preventive measures during FTU

CONCLUSION

- Comprehensive management, including timely and proper interventions, can prevent further deterioration, improving the prognosis and increasing the graft survival rate in the necrotic area.

References

1.Chen J, Qu Q, Guo Y, et al. Recipient site scalp necrosis: A rare postoperative complication of hair transplantation. *J Cosmet Dermatol*. 2024; 23: 622-629. 2. Loganathan, Eswari; Sarvajnamurthy, Sacchidanand; Gorur, Divya; Suresh, Deepak Hurkudli; Siddaraju, Maheshwari Nallur; Narasimhan, Revathi Thimmanhalli. Complications of Hair Restoration Surgery: A Retrospective Analysis. International Journal of Trichology 6(4):p 168-172, Oct–Dec 2014.

CONFLICT OF INTEREST- Nil