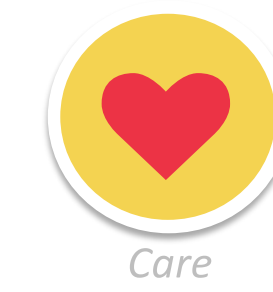




Scalp Burn Injury Associated with Hair Highlight Treatment

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Introduction

Hair highlighting treatment has become popular at salons across the country. The ubiquity of this beauty treatment gives many people the impression that it is safe. The process of changing hair color differs between hair salons and hair stylists. We describe the cases of two teenage patients who received third degree burns from hair highlighting treatments. Each patient had a different hair highlighting technique used and different treatment modality. Scalp burns can be particularly difficult to heal.

Methods

As part of a quality improvement study, a retrospective review was conducted on two patients admitted to Shriners Hospitals for Children – Boston for scalp burn injuries due to hair highlighting.

Results

The following table below compares and contrasts the two cases of teenage patients (**Table 1**).

Table 1. Comparison of Two Patients Treated for Scalp Burn Injury Due to Hair Highlighting

Variable	Patient 1	Patient 2
Etiology	Hot Foil	Bleach
Topical Treatment	Debriding Enzyme	Mineral Oil, Topical Antibiotic Ointment
Surgical Intervention	Yes	No
Days to Healing	56	53
Anxiety Management	Medication and Psychology Intervention	None
Follow Up Treatment	Tissue Expander	None
Alopecia	None	Present

Results (continued)

Patient 1 received a hot foil hair lighting application. After the foils were applied to the hair, a heat lamp was used to complete the treatment. After approximately five minutes, the patient told the hairdresser her scalp was tingling. Initially dismissed by hair salon staff, the patient finally removed heat lamp and foils from hair herself. First two weeks of treatment were administered by her primary care provider before being seen at our outpatient clinic. Topical debriding enzyme was used and surgery was discussed. Patient underwent her first surgery which was debridement followed by excision and grafting of scalp. Post-op course went well. Patient returned at her convenience for tissue expansion the following year.



Figure 1. Debridement and excision and grafting of scalp (left). Post-operative view of graft (middle). Post-operative view of tissue expansion of scalp (right).

Patient 2 received a hair highlighting treatment of bleach and water mixture. Patient complained of burning and immediately her hair was washed out by hairdresser. Patient did not report incident to parents, and went off to camp for 2 weeks. Upon admission, the patient's treatment plan was conservative and consisted of mineral oil comb through and topical antibiotic ointment applied multiple times a day at home. The patient was seen in clinic once per week. This scalp wound healed 53 days after initial injury. Patient was offered tissue expansion surgery, but had declined.



Figure 2. Scalp post chemical burn (left). Post-treatment of mineral oil comb through and topical antibiotic ointment application (right).

Conclusion

Being such a common procedure, a protocol in place with predicted outcomes is needed. This would benefit both patient and provider. It is recommended that a more detailed investigation of this burn injury be performed, to identify treatment strategies consistent with best practice.

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