



# P#05

<b>Abstract Title:</b>	<b>Pediatric Burn Injury Associated with the Application of Synthetic Hair and Review of the Literature</b>
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<b>Objective:</b>	<ol style="list-style-type: none"><li>1) To recognize the potential for serious burn injury associated with use of synthetic hair application in children.</li><li>2) Understand that public education efforts in communities where the use of synthetic hair in children is prevalent is important in alerting the general population of the danger of this practice in children.</li></ol>
<b>Abstract:</b>	<p><b>Introduction:</b> Hair care is an important part of many cultures and often includes synthetic hair which is sewn, glued, or bonded to the existing hair. This is done with thermal energy devices, steam, or boiling water. Heating methods are also used in children, who are particularly vulnerable to burn injury. We report the case of two children who sustained partial thickness burns while their synthetic hair was being set using boiling water. Both children had extensive burns requiring hospitalization and one required excision and grafting.</p> <p><b>Results:</b> Both patients presented within three days of each other. The first patient was a 3 year old African American female who sustained a 15% TBSA burn from hot steam and boiling water during care of synthetic hair which had recently applied. The second patient was a 5 year old African American female who sustained a 10% TBSA burn when a pot of boiling water (in which her synthetic hair was submerged) fell over onto her scalp and back. Both patients required admission to the burn unit. The three year old patient had injuries which were full thickness and required excision and grafting, while the five year old's injuries were managed non-operatively. Length of hospital stay was 7 days for the patient requiring excision and grafting and 4 days for the patient that was non-operatively managed.</p> <p><b>Discussion:</b> We present the cases of two pediatric patients who sustained significant injury (10% and 15% TBSA burns) and who required multiple days of hospitalization. Additionally, one of the two patients required excision and grafting of full thickness injuries.</p>

Burns sustained from submersion of hair into boiling water is not something we had treated in our Burn Center previously. Review of the literature indicates that this is the first report of relatively large burns sustained from this mechanism. Previous authors (Seidel et al 1994, Namias et al 2016) have reported such injuries, but the average TBSA burned has been small (3% TBSA), with no patients requiring operative intervention.

Both of patients presented in summer-- both mothers applied hair weaves as this required less maintenance of the child's natural hair. The use of boiling water to set synthetic hair is not uncommon in adults, but is inherently dangerous in children who cannot sit still. Patients and physicians should be aware of the potential for devastating injury associated with this practice. Additionally, educational efforts focused towards African American communities, in which this is common practice, may help prevent such injuries.