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67 **Transient Dysphagia After Burn Injury in Children: An Under-identified Problem**

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**Introduction:** Severely burn injured pediatric patients are at risk of dysphagia (difficulty swallowing) due to prolonged intubation or tracheostomy placement. To improve the early identification and treatment of dysphagia, we implemented a swallowing assessment protocol. We hypothesized that the swallowing assessment protocol is effective for identifying and treating dysphagia after prolonged intubation.

**Methods:** Between October 2016 and December 2020, pediatric burn patients with facial burn injuries, prolonged mechanical ventilation, tracheostomy, inhalation injury and/or anoxic events were placed on the swallowing protocol. The protocol included a Transitional Swallow Screen (TSS) performed within 24 hours after extubation or decanulation by an advanced practice swallow occupational therapist. If signs of dysphagia were noted, recommendations on diet consistency and treatment for positioning and feeding were implemented. Regular reassessments continued until the patient was determined to have regained pre-morbid swallowing function. Data on patient demographics, burn characteristics, dysphagia, treatment and outcome were collected. Descriptive statistics were used to describe the population, treatments and outcome.

**Results:** A total of 33 pediatric burn patients were included. Mean age was 8.1±5.9 years and TBSA was 48.1±26.8%. Median time from injury to swallow assessment was 45 (21-81) days. The majority of patients suffered from flame burns (70%). Almost all of the patients were intubated (97%) and 85% underwent a tracheostomy. Patients had a facial burn (73%), inhalation injury (24%) or anoxic injury (15%). Transient dysphagia was diagnosed in 79% of patients. Subsequent therapeutic procedures as a result of the TSS included: neurologic re-education (30%), swallow therapy exercises (55%), desensitization (42%), and patient/ family training and supervision (79%). All patients eventually returned to normal swallow and regular diet. This occurred at an average of 72.5±46.7 days post injury and 8.2±18.0 days post swallow assessment.

**Conclusions:** Pediatric patients with substantial burn injury may not only be at risk for aspiration but also have other forms of dysphasia that require intervention. Implementation of a swallowing protocol can identify patients who required further therapeutic intervention and can guide the recovery of safe swallowing and functional oral intake.

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68 **The Association Between Body Mass Index and Physical Function in Adult Burn Survivors**

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**Introduction:** An area of rehabilitation research in burns is the impact of co-morbidities. Obesity is one of these, is an increasing public health concern, and its role remains controversial regarding burn injury and physical recovery. Our aim was to evaluate associations between body mass index (BMI) as a measure of obesity, at discharge and self-reported physical function (PF) during recovery of adult burn survivors.

**Methods:** This study included data that was collected by four American Burn Association-verified burn centers, which contribute to the Burn Model System National Database project. The data included BMI obtained at hospital discharge and self-reported Patient-Reported Outcomes Measurement Information System (PROMIS)-29 PF-mobility and upper extremity scores assessed at 6-, 12-, and 24-months after burn. Mixed linear models for repeated measures and regression models were used to assess associations between BMI and PROMIS-29 PF scores over time. Values are expressed as means ± SD. Significance was set at  $p < 0.05$ .

**Results:** A total of 502 adult patients aged 47 ± 16 years were included, with mean total body surface area burned (TBSA) of 17 ± 18 % (range; 1.0-88%) and mean BMI of 23.1 ± 5.4 kg·m<sup>-2</sup> (range; 14.0-64.7 kg·m<sup>-2</sup>). We found no significant effect at 6 months (beta=-0.045,  $p = 0.54$ ) nor at 12 months after injury (beta=-0.063,  $p = 0.44$ ) when adjusted for age, burn size, and sex, however, BMI at discharge had a significant negative effect on self-reported mobility scores 24 months after injury (beta=0.218,  $p < 0.05$ ).

**Conclusions:** Increased weight (i.e. BMI) at discharge was negatively associated with PF during recovery. Benefiting from a large sample size, our analysis suggests that long term recovery and restoration of PF in adult burn survivors is compromised by excess body weight.