Risk factors for and characteristics of dysphagia development in thermal burn injury and/or inhalation injury patients: a systematic review

Background
- Dysphagia - potential consequence of thermal burn injury
  - It can complicate survivor recovery by limiting capacity to meet elevated nutrition and hydration needs and increasing aspiration risk and length of time enteral nutrition is required

Inclusion criteria:
- Participants: Studies that included children (≥ 2) and adults (≥ 18) who have sustained thermal burn injury and/or inhalation injury and admitted to ICU, Burns ICU (BICU), or burns unit
- Exclusion: Studies with patients with significant multi-trauma

Types of intervention(s)/phenomena of interest:
- Objective assessments: FEES, MBS / videofluoroscopy
- Subjective assessments: clinical bedside swallowing evaluation and dysphagia screening assessments either alone or combined

Methods
- Included studies represented 3495 patients (range 2 - 1077 patients), whilst 74.5% of dysphagic patients (where reported) had received burns to the head & neck region
- Mean duration of intubation for dysphagic patients ranged from 11.2 - 47 days
- Incidence of dysphagia in patients who received tracheostomies was 31.65% (25 dysphagic of 75 total patients); mean duration of trachostomies reported ranged from 30 - 42.2 days
- Mean time to first oral intake in dysphagic patients ranged from 27.29 - 63 days

Conclusions
- Presence of inhalation injury, head & neck burns, the need for mechanical ventilation and/or tracheostomy insertion appears to increase the risk of dysphagia in the burn injury population
- Defining characteristics of post burn dysphagia is compromised by the heterogeneous nature of current research and lack of large studies utilising objective/instrumental examination
- Comparing dysphagia type and severity between studies is confounded due to the variance in diagnostic tools and dysphagia rating scales utilised. Developing standardized terminology and increased use of objective assessment tools in future burn injury research will improve interpretation and application of research findings

References