Introduction:
Tracheal intubation (TI) in adult burn patients might be unnecessary in 30 to 40% of cases. [1-2] In pediatric burn patients, there is little data on both the rate of TI and the rate of early extubation. [3] It has been common practice for a child with a facial burn and/or a suspected airway injury to be intubated early due to the risk of losing airway patency. However this risk should be mitigated against the potential risks of TI and mechanical ventilation in children. Therefore the aim of this study was to describe the airway status of child burn victims taken in charge of in our pediatric burn intensive care unit. Focused on patients arriving with TI, we investigated the rate of early extubation. In addition we compared non intubated patients with those with prolonged TI.

Methods:
This retrospective study described a cohort of 1520 patients hospitalized between 2010 and 2018. Data was retrospectively recorded from the patient’s paper clinical chart.

Results:
The mean age of our patients was 2.8 ±3.1 years [mean±sd] with an average burn area of 14±11%. 86% had scald burns and 45% had facial burns.
4% of the children were admitted in the burn ICU with TI. For 36% of them, tracheal tube was removed within the first 48 hours after admission. The probability of prolonged TI increased independently with the burned skin area (BSA) (p <0.0001), the presence of facial burns (p = 0.001), and in case of flame burns (p = 0.007). Among patients with more than 70% BSA, 85% were intubated more than 48h. Among patients with less than 20% BSA, 0.5% were intubated more than 48h.

Conclusion:
According to our retrospective data, it seems appropriate to intubate children with 70% and more BSA, while for patient with less than 70% BSA, it might be relevant to seek guidance from physician of the nearest Burn Center. Under 20% BSA, TI seems rarely required.

References:
Probability of tracheal intubation depending on burn skin area, facial burns and flame burns (multivariate analysis)