Introduction

Prolonged endotracheal intubation in infants may lead to laryngeal damage, with stridor being the most relevant clinical symptom.

Our objective was to determine the incidence of post-extubation stridor in children within a tertiary referral center and to identify contributing factors.

Methods

Children intubated for more than 24 hours were prospectively enrolled with follow up until discharge of the hospital.

Potential variables thought to mediate the risk of laryngeal damage, were recorded and analysed.

Results

151 children, aged from 0 to 16 years, were included. The median duration of intubation was 4 days ranging from 1 to 31 days.

Stridor following extubation occurred in 29 (19.2%) patients.

In multivariate analyses we found the following independent predictors of stridor: age, intubation on the scene, the use of cuffed tubes, intubation for more than a week and the use of steroids.

Future research will focus on swallowing disorders in children with a tracheostomy tube, the role of polysomnography in tracheotomy decannulation in the pediatric population and long-term results after pediatric airway surgery for laryngo-tracheal stenosis.

Conclusion

There is a high incidence of post-extubation stridor.

Young age, intubation on the scene, the use of cuffed tubes and intubation for more than a week are associated with a significant increased risk of post-extubation stridor.

The significant higher use of steroids is interpreted as a consequence of the physician anticipating on difficulties during extubation.