INTRODUCTION

The aim of the study was to assess the quality of life after transoral CO\textsubscript{2} laser microsurgical division of ary-epiglottic folds and/or epiglottopexy in children suffering from laryngomalacia. Laryngomalacia is the most frequent laryngeal malformation in newborns, causing severe respiratory distress [1, 2].

According to the literature, between 60 and 75% of connatal laryngeal anomalies associated with stridor result from laryngomalacia which is caused by variations in the anatomy of the supraglottic space and/or disturbance of neurologic function [3, 4].

During inspiration a valve-like inward collapse of the supraglottic structures (epiglottis and/or the arytenoid mucosa) may be observed which leads to obstruction of the glottic space. The most common findings in these patients are shortened aryepiglottic folds, oromegaloepiglottic, bulky corniculate cartilages and lax supraglottic tissue. With increasing age the disease usually is self-limiting. A low percentage of the children, however, suffers from severe symptoms so that surgical intervention is inevitable [5, 6].

METHODS AND MATERIALS

A retrospective analysis of 23 children who were treated between 1998 and 2009 was performed. A total of 18/23 children suffering from severe inspiratory stridor in connection with laryngomalacia underwent flexible pharyngo-laryngotracheoscopy. In case of evidence of treatment requiring laryngomalacia transoral CO\textsubscript{2} laser microsurgical division of the ary-epiglottic folds and/or epiglottopexy was performed (n=23). A standardized questionnaire on the basis of the “Glasgow Benefit Inventory” (GBI) was used. Questions were focusing on different aspects concerning children and parents quality of life postoperatively.

RESULTS

The questionnaire (comprising 18 items) was answered by all parents of the treated patients. None of the surgically treated children had postoperative deterioration of the respiratory situation. In 20 children (95%) a single endoscopic intervention could achieve a significant improvement of the initial complaints. Inspiratory stridor disappeared completely in these patients. Further postoperative complications were not observed. There was no evidence for aspiration postinterventionally.

18/18 children and parents quoted an improvement of sleep and a reduction of anxiety about the future. 16/18 of the children and parents reported an improvement of quality of life after the intervention with less stridor (90%) and enhancement of feeding (95%). They valued quality of life of their children better than 50% postoperatively.

REFERENCES


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Fig. 1: Transoral CO\textsubscript{2} laser transection of the ary-epiglottic folds

Fig. 2: Epiglottopexy

Fig. 3: Postoperative quality of life of children with laryngomalacia