Evaluation of Pulmonary Complications and Affecting Factors in Children for Repaired Esophageal Atresia and Tracheoesophageal Fistula

Gokcen Tugcu[1], Tutku Soyer[2], Sanem Eryılmaz[1], Mina Hizal[3], Nagehan Emiralioğlu[4], Deniz Dogru[4], Nural Kiper[4], ugur ozcelik[4], and Ebru Yalcin[5]

[1]Ankara Şehir Hastanesi
[2]Hacettepe Universitesi Tip Fakultesi
[3]hacettepe university
[4]Hacettepe University
[5]Hacettepe University Faculty of Medicine

November 11, 2020

Abstract

INTRODUCTION: Recurrent pulmonary infections, wheezing and stridor due to swallowing dysfunction, esophageal dysmotility, gastroesophageal reflux, tracheomalacia and bronchomalacia are frequently seen complications after esophageal atresia and tracheo-oesophageal fistula (EA-TEF) surgeries. This study aimed to investigate the frequency and causes of respiratory problems and to evaluate the factors that affect respiratory morbidity in patients who had undergone EA-TEF repair in a tertiary referral center. METHODS: Preoperative and postoperative records of patients with EA, TEF+EA and isolated EA were examined retrospectively. Accompanied diseases and swallowing dysfunction symptoms were questioned. Bronchoalveolar lavage results were investigated if the patient had flexible bronchoscopy. RESULTS: A total of 71 children with EA were included in the study, and seven patients who did not have follow-up after surgery were excluded. 46 of the 64 patients continue regular follow-up visits in our department. Male sex, primary EA repair in another center, EA type C, accompanying genetic anomalies, severe tracheomalacia, late per oral feeding (1 year after surgery), and severe GER were found to cause significantly higher incidence of coughing, recurrent wheezing, recurrent pneumonia, and bronchiectasis despite surgical and medical treatments ($p = 0.048$, $p = 0.045$, $p = 0.009$, $p = 0.029$, $p = 0.025$) CONCLUSİON: Even if anatomical anomalies are corrected by surgery in patients who underwent EA repair, precautions can be taken for GERD, laryngotracheomalacia, and swallowing dysfunction, and effective pulmonary rehabilitation can be initiated with early multidisciplinary approach before the development of respiratory tract symptoms.

Hosted file

`main document. 10.10.2020.pdf` available at https://authorea.com/users/369107/articles/492327-evaluation-of-pulmonary-complications-and-affecting-factors-in-children-for-repaired-esophageal-atresia-and-tracheoesophageal-fistula

Hosted file

`TABLE 1.pdf` available at https://authorea.com/users/369107/articles/492327-evaluation-of-pulmonary-complications-and-affecting-factors-in-children-for-repaired-esophageal-atresia-and-tracheoesophageal-fistula

Hosted file

TABLE 2.pdf available at https://authorea.com/users/369107/articles/492327-evaluation-of-pulmonary-complications-and-affecting-factors-in-children-for-repaired-esophageal-atresia-and-tracheoesophageal-fistula

Hosted file

TABLE 3.pdf available at https://authorea.com/users/369107/articles/492327-evaluation-of-pulmonary-complications-and-affecting-factors-in-children-for-repaired-esophageal-atresia-and-tracheoesophageal-fistula

Hosted file

TABLE 4.pdf available at https://authorea.com/users/369107/articles/492327-evaluation-of-pulmonary-complications-and-affecting-factors-in-children-for-repaired-esophageal-atresia-and-tracheoesophageal-fistula