

SARS-CoV-2 infection in patients with esophageal atresia and tracheoesophageal fistula: An international survey under the auspices of the International Network on Esophageal Atresia (INoEA)

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Pediatric and adult patients born with esophageal atresia with or without tracheoesophageal fistula (EA/TEF) are at risk for respiratory infections and severe complications. This is mostly related to the association of the esophageal condition with tracheomalacia, asthma or gastroesophageal reflux. Taking advantage of the International Network of Esophageal Atresia (INoEA) we aimed to investigate the impact of the SARS-CoV-2 in patients previously operated of esophageal atresia.

An international survey was conducted amongst the INoEA members starting on April 2020 and still recruiting (for information www.inoea.org). Information on demography, type of esophageal atresia, comorbidities, clinical data regarding EA-TEF, symptoms suggestive of the SARS-CoV-2 infection, complications, hospitalization, and therapies administered for COVID-19 was collected for all patients who were reported. The study was approved by the Sainte-Justine University Health Centre IRB.

Seventeen patients (14 children, 9 males) with a mean age of 69.4 months (range 12 months – 30 years) were reported from Italy, Argentina, Switzerland, Netherland, Canada, France, India and Turkey. All patients had a documented infection confirmed by PCR or rapid test except 3 children who were considered positive after a contact with an infected person.

Nine patients (53%) had a type C EA-TEF, 4 (23%) a type A, 3 an other type. Eleven (65%) had chronic respiratory problems (asthma n=3, tracheomalacia n=5, recurrent respiratory tract infections n=3). Six (35%) had associated cardiac malformations. Seven (41%) had an history of recurrent anastomotic strictures. PPI (n=4, 23%), swallowed budesonide (n=3, 18%), inhaled bronchodilators or corticosteroids (n=5, 29%) were the most frequent reported medications. Symptoms at presentation included cough (n=5, 29%), fever (n=2, 12%), vomiting (n=2, 12%), rhinitis (n=1, 6%) and abnormal taste or anosmia (n=2, 12%).

Six patients (35%, 4 children and 2 adults) were hospitalized. None needed any respiratory support except one who was temporarily put on nasal oxygen. No specific treatment directed to SARS-CoV-2 was administered. No patient was admitted in ICU. All six patients were discharged with an uneventful outcome. The remaining 11 patients had similarly an uneventful outcome.

In conclusion, in patients with EA/TEF, the SARS-CoV-2 infection does not represent a risk for severe respiratory complications or severe outcome. The high rate of hospitalization is probably due to a selection bias of the present survey and may be linked to a highest awareness of the health providers towards the population of EA/TEF patients.