



Therapeutic educational pathway effect on asthma control: a pilot study

Laura Montalbano, Giovanna Cilluffo, Velia Malizia, Salvatore Fasola, Manuel Gentile, Marco Arrigo, Dario La Guardia, Mario Allegra, Nicola Murgia, Simona Pichini, Rosanna Mancini, Maria Concetta Rotolo, Stefania La Grutta

European Respiratory Journal 2018 52: PA4683; DOI: 10.1183/13993003.congress-2018.PA4683

[Article](#)[Figures & Data](#)[Info & Metrics](#)

Abstract

Background: Asthma is the most common chronic disease in childhood. Maintaining Asthma Control (AC) is the goal of GINA guidelines. Therapeutic educational pathway (TEP) can help to reduce the use of health care and to achieve AC. The effect of TEP with the telemedicine did not yet investigate.

Aim: to assess the impact of the TEP together with a mobile app (DragONE, freely available in apple and play store) and a portable spirometer (SmartOne MIR, Italy) in a cohort of 50 asthmatic children, 6-11 yrs.

Methods: Children were randomized into TEP and no TEP group (1:1). Children attended visits every month for a 3 months follow-up period. DragONE and SmartOne were provided to all parents. Children performed PEF two times per day and recorded symptoms. Children completed CACT and a detailed medical history. Urinary cotinine, nicotine and polycyclic aromatic hydrocarbons metabolites were measured throughout the study as possible modifier in AC. The least square mean difference, adjusted for different risk factors was applied in order to assess the inter visit change in C-ACT scores between TEP and No TEP. A $p\text{-value} \leq 0.05$ was considered significant.

Results: a significant improvement in AC was observed from T1 to T4 only in TEP, the different variation in C-ACT was significantly higher in TEP than No TEP (Tab.1).

Conclusions: this study confirms the importance of TEP in pediatric asthma, suggesting that it may help in asthma management.

Table 1. Least square mean difference for C-ACT in TEP vs NO TEP

| | TEP n=25 | NO TEP n=25 |
|--|--------------|----------------|
| C-ACT | | |
| T1-T2 LS mean change (p-value) | -0.82 (0.77) | -1.53 (0.77) |
| T1-T2 LS mean change differences (p-value) | | -0.71 (0.69) |
| T1-T3 LS mean change (p-value) | 2.73 (0.30) | 1.09 (0.52) |
| T1-T3 LS mean change differences (p-value) | | -1.64 (0.18) |
| T1-T4 LS mean change (p-value) | 5.11 (0.02) | 2.73 (0.13) |
| T1-T4 LS mean change differences (p-value) | | -2.39 (0.03) |

[Download figure](#)

[Open in new tab](#)

[Download powerpoint](#)

Footnotes

Cite this article as: European Respiratory Journal 2018 52: Suppl. 62, PA4683.

This is an ERS International Congress abstract. No full-text version is available. Further material to accompany this abstract may be available at www.ers-education.org (ERS member access only).

Copyright ©the authors 2018

We recommend

Usefulness of portable spirometry in addition to clinical asthma control score (C-ACT) in atopic children before performing an oral food challenge.

Mathilde Jouglet et al., European Respiratory Journal

Effectiveness of Pulmonary Rehabilitation for Patients with Asthma: EPRA-RCT

Konrad Schultz et al., European Respiratory Journal

Comparison of sit-to-stand test and six-minute walk test in asthmatic and healthy children

Serap Acar et al., European Respiratory Journal

Influence of sex in inhaler technique, adherence to treatment and control of Asthma.

Gonzalo Jimenez Galvez et al., European Respiratory Journal

Does Exhaled Nitric Oxide Correlate with Established Measures of Asthma Severity?

Nemr Eid et al., European Respiratory Journal

NINR: January 2007

Medscape

Adherence to Asthma Guidelines for Children, Tweens, and Adults

PracticeUpdate

Concordance of opinions between patients and physicians and their relationship with symptomatic control and future risk in patients with moderate–severe asthma

Astrid Crespo-Lessmann et al., BMJ Open Resp Res

Educational home visits can improve asthma in children, study suggests

Johns Hopkins Medical Institutions, ScienceDaily

Measuring Medication Adherence Among Children With Asthma

Marilyn W. Edmunds et. al., Medscape