



Therapeutic educational pathway effect on asthma control: a pilot study

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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)

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Footnotes

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