

Letter to the Editor

The routine use of oral steroids in paediatric asthma is not routine

Brian A. Kuzik MD MSc FRCP

Director, Paediatric Asthma Clinic, Royal Victoria Regional Health Centre, 201 Georgian Drive, Barrie, ON L4M6M2

Correspondence: Brian A. Kuzik, MD, Director, Paediatric Asthma Clinic, Royal Victoria Regional Health Centre. Telephone 705-728-3766 fax 705.728.3757, e-mail kuzikb@rvh.on.ca

I would like to thank the authors of *Physician and parent barriers to the use of oral corticosteroids for the prevention of paediatric URTI-induced acute asthma exacerbations at home*, published in the July 2017 issue for their contribution in our efforts to understand and improve translational medicine; their opinions are valuable and welcome. Unfortunately, they have directed their talents to study barriers preventing physicians and parents from adopting a treatment strategy that is controversial at best and widely rejected at worst.

The authors studied 27 children (52% of which were preschoolers) and report on barriers to the use of parent-initiated oral corticosteroids (OCS) at the onset of a upper respiratory tract infection (URTI) to prevent acute asthma exacerbations—a strategy which they describe as ‘effective in the management of acute asthma’ and its use as a ‘key message to paediatricians’ (1). To support this contention, they cite a 10-year-old American Guideline (2) from the National Heart Lung and Blood Institute; a recommendation that has remained unchanged from an even earlier 1997 version of this Guideline (3)—despite 20 years of published research to inform a more contemporary view. In addition, the authors further cite two Cochrane reviews (4,5) as evidence that administering oral steroids at the onset of URTI symptoms can improve asthma-related outcomes. These Cochrane Reports, however, examined the rapid benefits of the addition of OCS to reduce asthma-related symptoms in patients receiving standard asthma therapy in an Emergency Department (ED). Although it may be tempting to extrapolate these findings to support the strategy of parent-initiated OCS at the onset of all URTIs at home, that was not the objective of those reviews and should not be generalized to support that approach when other, more direct evidence is available.

Beigelman et al. (6) recently summarized the available clinical trials on this topic and highlight the paucity of evidence to support the widespread use of OCS in this age group in general, and the lack of evidence supporting parent-initiated OCS use

at the onset of a URTI in particular. In addition, the short-term treatment with OCS in young children is not without risk and should not be considered lightly (7).

The use of OCS to treat severe, acute viral-triggered wheezing remains an important option in current Canadian Asthma Guidelines (8,9) but the routine prophylactic use of parent-initiated OCS at the onset of a URTI does not. In our hands, standard asthma care using these Canadian Guidelines reduces asthma-related paediatric ED visits and admissions by approximately 60% and 80%, respectively (10). In this scenario, we view the need for OCS during viral-triggered asthma exacerbations as a management failure, not a component of routine care.

Research in translational medicine is a crucial component of evidence-based medicine. We welcome future publications from the authors to help reduce the barriers preventing greater adoption of our national guidelines.

References

1. Smith N, Smith A, Wang A, et al. Physician and parent barriers to the use of oral corticosteroids for the prevention of paediatric URTI-induced acute asthma exacerbations at home. *Paediatr Child Health* 2017;22(4):190–194.
2. Guidelines for the Diagnosis and Management of Asthma. National Heart Lung and Blood Institute. EPR 3. 2007. www.nhlbi.nih.gov/guidelines/asthma/asthgdln.pdf (Accessed April 22, 2014)
3. Guidelines for the Diagnosis and Management of Asthma. National Heart Lung and Blood Institute. EPR 2. 1997. www.nhlbi.nih.gov/health-pro/guidelines/archive/asthma-expert-panel (Accessed June 21, 2017)
4. Rowe BH, Spooner C, Ducharme F, Bretzla J, Bota G. Early emergency department treatment of acute asthma with systemic corticosteroids. *Cochrane Database Syst Rev* 2001;(1). doi:10.1002/14651858.CD002178
5. Rowe BH, Spooner C, Ducharme F, Bretzla J, Bota G. Corticosteroids for preventing relapse following acute

- exacerbations of asthma. Cochrane Database Syst Rev 2007;(3). doi:10.1002/14651858.CD000195.pub2
6. Beigelman A, Durrani S, Guilbert TW. Should a preschool child with acute episodic wheeze be treated with oral corticosteroids? A pro/con debate. *J Allergy Clin Immunol Pract* 2016;4(1):27–35.
 7. Aljebab F, Choonara I, Conroy S. Systematic review of the toxicity of short-course oral corticosteroids in children. *Arch Dis Child* 2016;10(4):365–70.
 8. Loughheed MD, Lemiere C, Ducharme FM, et al.; Canadian Thoracic Society Asthma Clinical Assembly. Canadian thoracic society 2012 guideline update: Diagnosis and management of asthma in preschoolers, children and adults. *Can Respir J* 2012;19(2):127–64.
 9. Ducharme FM, Dell SD, Radhakrishnan D, et al. Diagnosis and management of asthma in preschoolers: A Canadian thoracic society and Canadian paediatric society position paper. *Can Respir J* 2015;22(3):135–43.
 10. Kuzik BA, Chen CP, Hansen MJ, Montgomery PL. Sustainable benefits of a community hospital-based paediatric asthma clinic. *Healthcare Quarterly* 2017; 20(2):63–7.