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Treatment of acute bronchitis in children with *Pelargonium Sidoides*

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Abstract

Bronchitis is one of the most common acute infections affecting pediatric patients. Most cases are caused by viral infections, do not respond to antibiotic therapy, and can take up to 14 days to resolve with supportive therapy. The purpose of this study is to determine if the use of *Pelargonium Sidoides* (Umcka™, EPs 7630) extract will decrease the duration and severity of symptoms from acute bronchitis in the pediatric population. *Pelargonium Sidoides* abstract is an extract of an African Geranium that has been used in traditional medicine for centuries. The review of the literature will evaluate multiple randomized controlled trials along with other studies that compare placebo, traditional supportive therapy and *Pelargonium Sidoides* extract to determine if the use of the extract will decrease severity and duration of illness without unacceptable side effects in the pediatric population. It has been demonstrated that providers will be able to safely advise patients to use *Pelargonium Sidoides* extract without any adverse side effects while helping to decrease the severity and duration of bronchitis symptoms in children. The finding indicate that routine use of *Pelargonium Sidoides* may give providers an alternative, effective and safe treatment that is well accepted by patients and caregivers for bronchitis in pediatric populations greater than one year of age compared to supportive therapy

Introduction

Pelargonium Sidoides is an herbal medication that has been used in traditional medicine for centuries. The herbal preparation has recently regained popularity especially with patients seeking an alternative to traditional medications and treatments. *Pelargonium Sidoides* is advertised to reduce the duration and symptoms of acute bronchitis.

Statement of the Problem

- No known medications reduce the duration or severity of acute bronchitis
- The health care provider has limited options to offer these patients as antibiotics have not been found to shorten the duration or severity of the illness

Research Question



Will the use of *Pelargonium Sidoides* in children greater than 1 year of age safely and effectively reduce the severity and duration of acute bronchitis?

Literature Review

–Current treatment for acute bronchitis

- McCance et al.(2010) states that treatment consists of rest, humidity, antipyretics, and cough suppressants

–Efficacy of *Pelargonium Sidoides*

- Havidvogel et al.(2007) using a BSS after one week of treatment demonstrated a decrease of 4.7 points

- Kamin et al.(2012) used a BSS system demonstrated a decrease of 4.4 points compared to placebo of 2.9

- Kamin et al.(2010) compared dosing of 30,60, and 90mg. The 60mg groups had a decrease BSS of 4.4 points and the 90mg group a decrease of 5.0 points compared to placebo

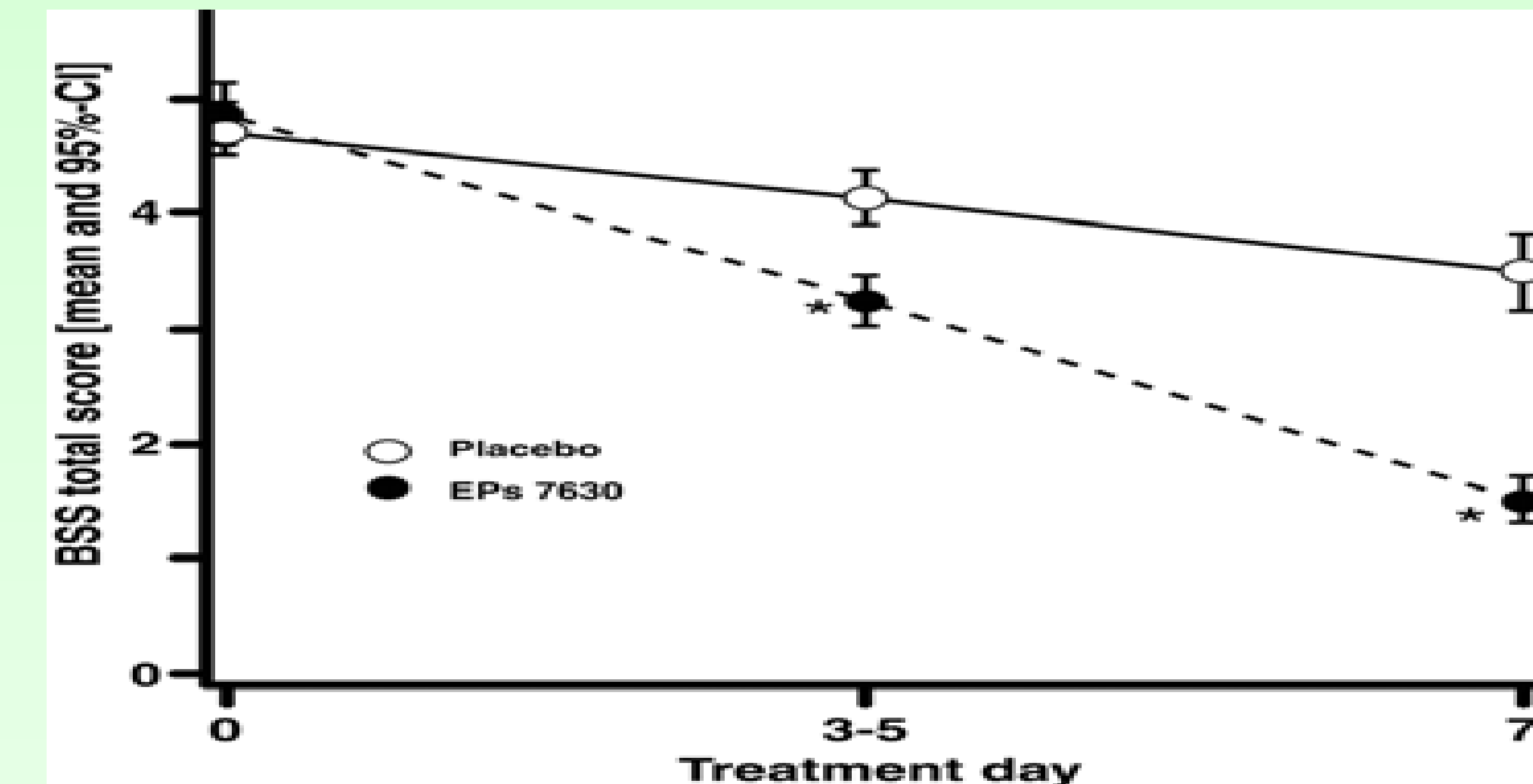
–Safety of *Pelargonium Sidoides*

- Kamin et al.(2008) noted 59 adverse events out of 200 patients. A causal relationship was noted in 8 events, none cited as serious. GI upset was most prevalent
- Fau et al.(2003) demonstrated 14 adverse events in the treatment group categorized as mild and GI upset

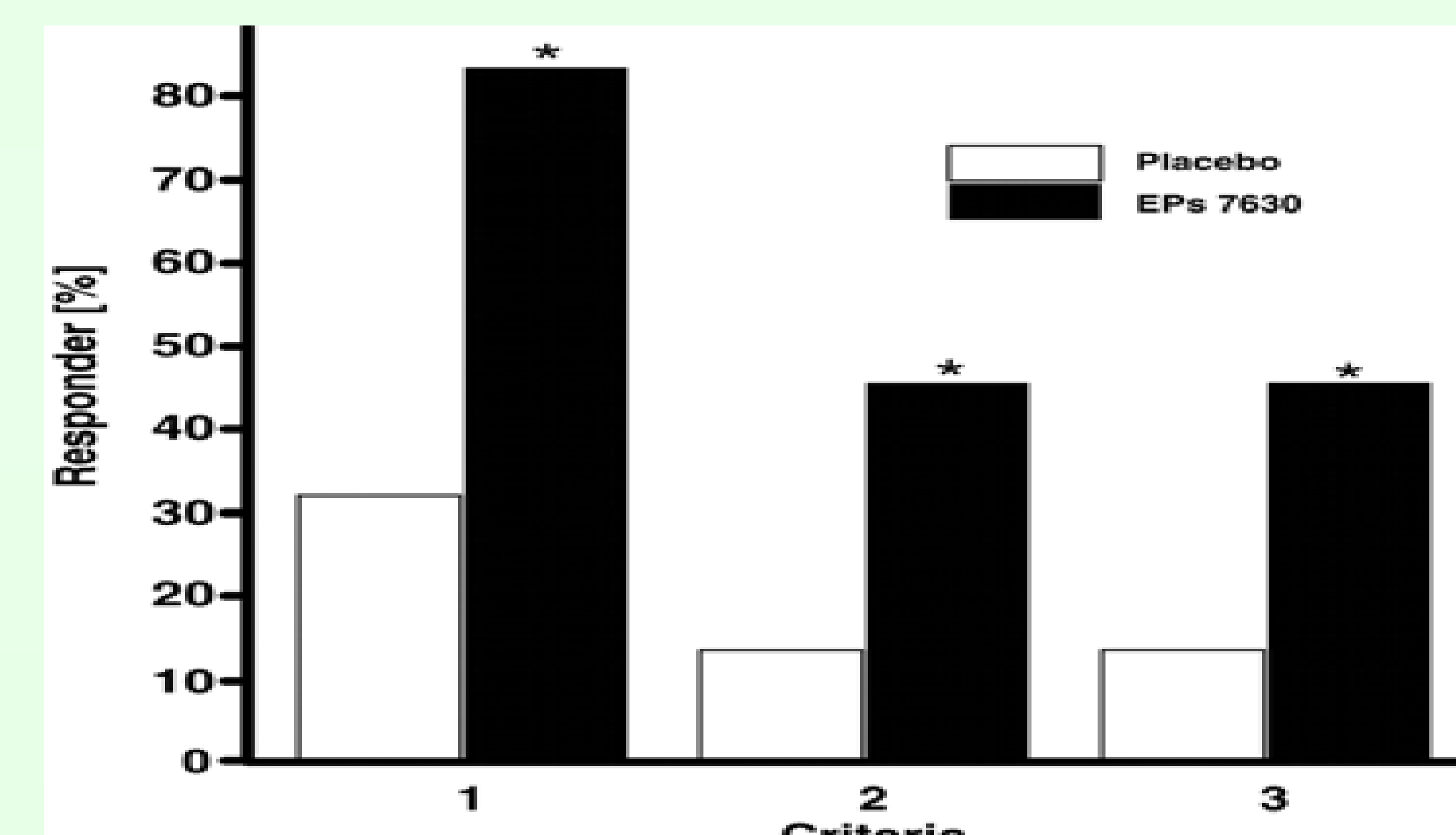
–Mechanism of Action

- Michaelis et al.(2011) investigated the effects on viral replication and demonstrated that *Pelargonium Sidoides* could inhibit replication of some viruses
- Neugebauer et al.(2005) demonstrated increased ciliary beat frequency after application of a solution of *Pelargonium Sidoides*

Discussion



Kamin, W., FAU - Maydannik, V.G., FAU, M. V., FAU, M. F., & Kieser, M. (2010). Efficacy and tolerability of EPs 7630 in patients (aged 6-18 years old) with acute bronchitis. *Acta Paediatrica*, 2010 Apr;99(4):537-43. doi: 10.1111/j.1651-2227.2009.01656.x. Epub 2010 Jan 11. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/200901656>



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- The best delivery and dosage of *Pelargonium Sidoides* is a liquid solution with 11% ethanol dosed at 90mg daily. This has been demonstrated in the literature to decrease symptom severity earliest in the disease process
- One study used a capsule to administer the medication, no comparison was performed to determine the best method of delivery
- All studies used a Bronchitis Severity Score (BSS) and included cough, pulmonary rales, and dyspnea
- Decrease in BSS score was greatest in all treatment groups compared to placebo
- Most common adverse events were classified under gastrointestinal and were mild
- No long term studies were performed to investigate safety

Applicability to Clinical Practice

- *Pelargonium Sidoides* can be used in addition to the usual comfort care in the pediatric population with acute bronchitis with very few adverse side effects noted in research
- The research has demonstrated a reduction in severity of cough, pulmonary rales, and dyspnea in children with acute bronchitis compared to placebo
- Total daily dosage of 60mg-90mg
- Begin treatment with *Pelargonium Sidoides* within 48 hours of symptom onset
- Cost of a week long treatment ranges from \$10- \$15
- *Pelargonium Sidoides* is well tolerated by patients and parents with the most common side effect of gastrointestinal upset

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thanks . . .

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