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Tratamento da asma (algumas) **controvérsias**

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Idefix

Está tudo bem assim e não podia ser de outra forma

Governante português. Séc XX

Eu nunca me engano e raramente tenho dúvidas

Governante português. Séc XX-XXI

Diagnosis and management of asthma in children 5 years and younger



GINA Global Strategy for Asthma Management and Prevention 2015

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Step 1 (children ≤ 5 years) – as-needed inhaled SABA



PREFERRED CONTROLLER CHOICE	STEP 1	STEP 2		STEP 3	STEP 4
		Daily low dose ICS		Double 'low dose' ICS	Continue controller & refer for specialist assessment
	Other controller options	Leukotriene receptor antagonist (LTRA) Intermittent ICS		Low dose ICS + LTRA	Add LTRA Inc. ICS frequency Add intermitt ICS
RELIEVER		As-needed short-acting beta ₂ -agonist (all children)			
CONSIDER THIS STEP FOR CHILDREN WITH:	Infrequent viral wheezing and no or few interval symptoms	Symptom pattern consistent with asthma and asthma symptoms not well-controlled, or ≥ 3 exacerbations per year		Asthma diagnosis, and not well-controlled on low dose ICS	Not well- controlled on double ICS
		Symptom pattern not consistent with asthma but wheezing episodes occur frequently, e.g. every 6–8 weeks. Give diagnostic trial for 3 months.		First check diagnosis, inhaler skills, adherence, exposures	

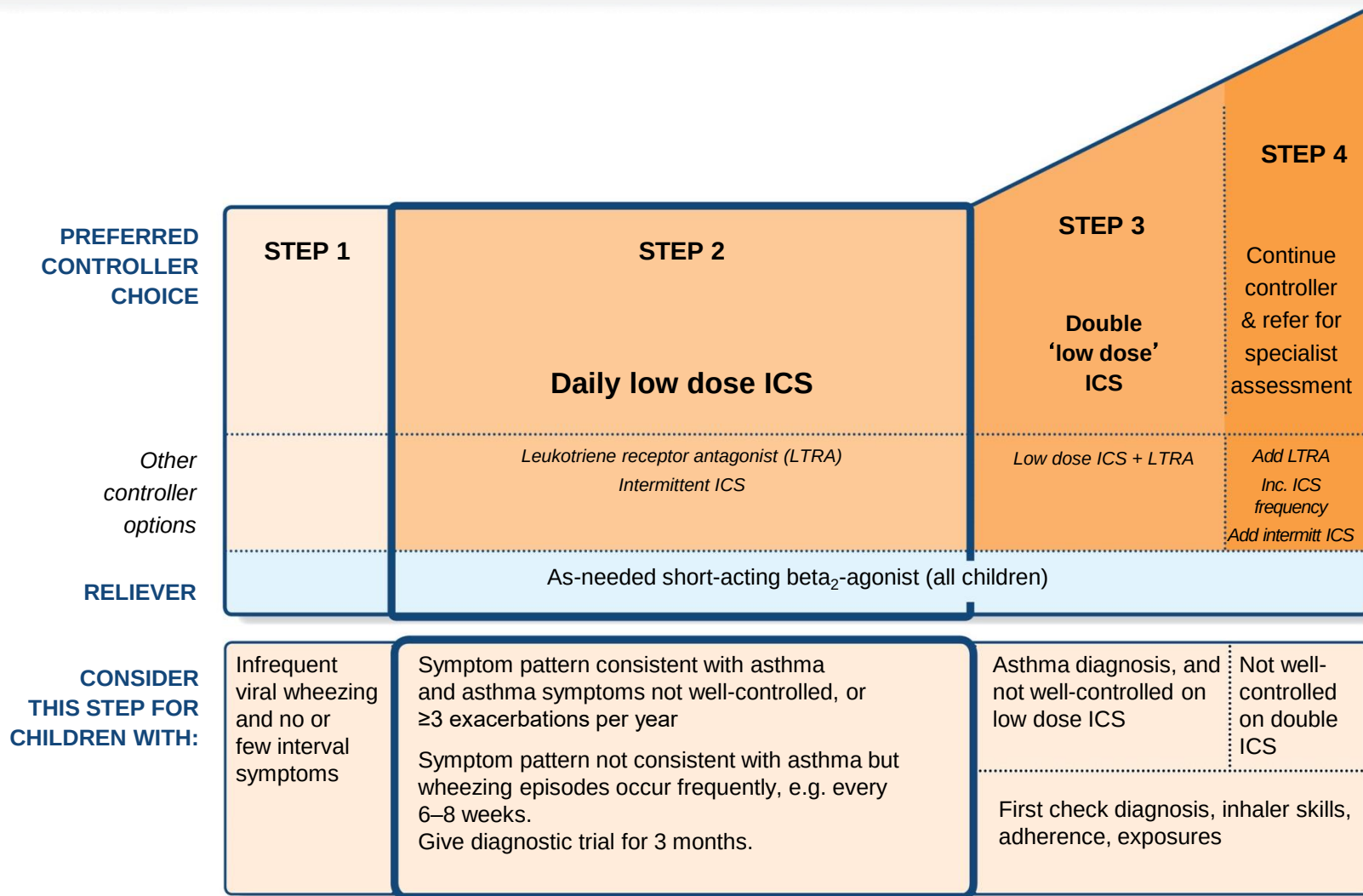
Step 1 (children ≤ 5 years) – as-needed inhaled SABA



- Preferred option: as-needed inhaled SABA
 - Provide inhaled SABA to all children who experience wheezing
 - Not effective in all children

- Other options
 - Oral bronchodilator therapy is not recommended (slower onset of action, more side-effects)
 - For children with intermittent viral-induced wheeze and no interval symptoms, if SABA is not sufficient, consider intermittent ICS.

Step 2 (children ≤ 5 years) – initial controller + as-needed SABA



Step 2 (children ≤ 5 years)

– initial controller + as-needed SABA

■ Indication

- Child with symptom pattern consistent with asthma, and symptoms not well-controlled, or ≥ 3 exacerbations per year
- May also be used as a diagnostic trial for frequent wheezing episodes

■ Preferred option: regular daily low dose ICS + as-needed inhaled SABA

- Give for ≥ 3 months to establish effectiveness, and review response

■ Other options depend on symptom pattern

- (Persistent asthma) – regular leukotriene receptor antagonist (LTRA) leads to modest reduction in symptoms and need for OCS
- (Intermittent viral-induced wheeze) – regular LTRA improves some outcomes but does not reduce risk of exacerbations
- (Frequent viral-induced wheeze with interval symptoms) – consider episodic or as-needed ICS, but give a trial of regular ICS first

'Low dose' inhaled corticosteroids (mcg/day) for children ≤ 5 years



Inhaled corticosteroid	Low daily dose (mcg)
Beclometasone dipropionate (HFA)	100
Budesonide (pMDI + spacer)	200
Budesonide (nebulizer)	500
Fluticasone propionate (HFA)	100
Ciclesonide	160
Mometasone furoate	Not studied below age 4 years
Triamcinolone acetonide	Not studied in this age group

- This is not a table of equivalence
- A low daily dose is defined as the dose that has not been associated with clinically adverse effects in trials that included measures of safety

Diagnosis and management of asthma in preschoolers: A Canadian Thoracic Society and Canadian Paediatric Society position paper

Can Respir J
May/June 2015

Francine M Ducharme MD MSc¹, Sharon D Dell MD², Dhenuka Radhakrishnan MD MSc³,
Roland M Grad MDCM MSc FCFP⁴, Wade TA Watson MD MEd⁵, Connie L Yang MD MSc⁶, Mitchell Zelman MDCM⁷

Inhaled corticosteroid (ICS) dosing categories* in children one to five years of age

Corticosteroid (trade name)	Daily ICS dose, micrograms (mcg) [†]	
	Low	Medium
Beclomethasone (QVAR [®])	100	200
Ciclesonide [‡] (Alvesco [®])	100	200
Fluticasone (Flovent [®])	100-125 [§]	200-250

Choosing an inhaler device for children ≤ 5 years



Age	Preferred device	Alternate device
0–3 years	Pressurized metered dose inhaler plus dedicated spacer with face mask	Nebulizer with face mask
4–5 years	Pressurized metered dose inhaler plus dedicated spacer with mouthpiece	Pressurized metered dose inhaler plus dedicated spacer with face mask, or nebulizer with mouthpiece or face mask

LABA's (perigo em crianças)

Age and Risks of FDA-Approved Long-Acting β_2 -Adrenergic Receptor Agonists

AUTHORS: Ann W. McMahon, MD, MS,^a Mark S. Levenson, PhD,^b Bradley W. McEvoy, DrPH,^b Andrew D. Mosholder, MD, MPH,^c and Dianne Murphy, MD^a

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KEY WORDS

asthma, meta-analysis, hospitalization, death

ABBREVIATIONS

LABA—long-acting β -adrenergic receptor agonist



WHAT'S KNOWN ON THIS SUBJECT: Two randomized controlled safety trials found that long-acting β -adrenergic receptor agonists (LABAs) were associated with three- to fourfold risks for asthma-related death. A meta-analysis later revealed that the greatest risks for severe asthma outcomes associated with LABAs were among children.



WHAT THIS STUDY ADDS: Results of this study substantiate the risks of LABAs for children and indicate that simultaneous use of inhaled corticosteroids might mitigate those risks. However, additional study of this question is needed.

Pediatrics 2011

1. LABA têm riscos
2. A associação com ICS pode mitigar esses riscos
3. Necessidade de mais estudos

ICS + LABA antes dos 5 anos

GINA 2015

GLOSSARY OF ASTHMA MEDICATION CLASSES

For more details, see full GINA 2015 report and Appendix (www.ginasthma.org) and Product Information from manufacturers.

Medications	Action and use	Adverse effects
CONTROLLER MEDICATIONS		
Inhaled corticosteroids (ICS) e.g. beclometasone, budesonide, ciclesonide, fluticasone propionate, mometasone	The most effective anti-inflammatory medications for persistent asthma. ICS reduce symptoms, increase lung function, improve quality of life, and reduce the risk of exacerbations and asthma-related hospitalizations or death. ICS differ in their potency and bioavailability, but most of the benefit is seen at low doses (see Box 6 (p12) for low doses of different ICS).	Most patients using ICS do not experience side-effects. Local side-effects include dysphonia and oropharyngeal candidiasis. Use of spacer with pMDI, and rinsing with water and spitting out after inhalation reduce local side effects. High doses increase the risk of systemic side-effects such as reduction in growth.
ICS and long-acting beta₂ agonist bronchodilator combinations (ICS/LABA) e.g. fluticasone propionate/salmeterol.	Addition of LABA to regular ICS has only been studied in children 4 years and older, and only in a small number of patients.	The LABA component may be associated with tachycardia, headache or cramps. Use of LABA without ICS in asthma is associated with increased risk of adverse outcomes.
Leukotriene modifiers (tablets) e.g. montelukast	Target one part of the inflammatory pathway in asthma. Used as an option for controller therapy. Less effective	Few side-effects.



LABA 's under 5

Único estudo sobre associação corticóide inal + LABA abaixo dos 5 anos

[J Asthma](#), 2004 Aug;41(5):575-82.

Efficacy and safety of inhaled corticosteroids in combination with a long-acting beta2-agonist in asthmatic children under age 5.

[Sekhsaria S¹](#), [Alam M](#), [Sait T](#), [Starr B](#), [Parekh M](#).

⊕ **Author information**

Abstract

The incidence of asthma in children under age 5 is higher than in any other segment of the population. NAEPP guidelines recommend treatment of some asthmatics in this age group with the combination of an inhaled corticosteroid and a long-acting beta2-agonist even though this practice has never been studied with children younger than 4. This retrospective study analyzes the efficacy and safety of a combination of fluticasone propionate (FP) and salmeterol (SA) in children under 5. Fifty patients who started using FP/SA before the age of 60 months were included in the analysis. To determine efficacy, we tracked the change in emergency room visits, hospitalizations, and the frequency of wheezing as a result of treatment. Emergency room visits were reduced from 78 to 5 ($p<0.001$), hospitalizations were reduced from 43 to 2 ($p<0.001$) and frequency of wheezing, daily, weekly, or monthly, was also reduced significantly ($p<0.003$). In terms of safety, there was only a 3.4% reduction in height percentile ($p=0.37$). Combination therapy is highly efficacious and safe for asthmatics under the age of 5. A well-designed prospective study is necessary to further evaluate the benefits and risks of this treatment method.

J Asthma 2004

LABA em idade pediátrica

Infarmed 2014

Adultos e adolescentes de idade igual ou superior a 12 anos

Seretaide Inalador 25/50 - 2 atuações duas vezes por dia

Seretaide Inalador 25/125 - 2 atuações duas vezes por dia

Seretaide Inalador 25/250 - 2 atuações duas vezes por dia

Crianças dos 4 aos 12 anos

Seretaide Inalador 25/50 - 2 atuações duas vezes por dia

→ Não se recomenda a utilização de Seretaide em crianças com menos de 4 anos de idade.

ICS + LABA



Asma não controlada com ICS

- Manter mesma dose de ICS ?
- Aumentar dose de ICS ?
- Associar LABA ?

Addition of long-acting beta₂-agonists to inhaled corticosteroids for chronic asthma in children (Review)

Chauhan BF, Chartrand C, Ni Chroinin M, Milan SJ, Ducharme FM

- Não reduziu nº de crises a necessitar de ciclos de CTC oral
- Não evitou hospitalizações. Com LABA até aumentou esse risco
- Melhorou F pulmonar
- Menor repercussão no crescimento

ORIGINAL ARTICLE

March 2016

Serious Asthma Events with Fluticasone plus Salmeterol versus Fluticasone Alone

David A. Stempel, M.D., Ibrahim H. Raphiou, Ph.D., Kenneth M. Kral, M.S.,
Anne M. Yeakey, M.D., Amanda H. Emmett, M.S., Charlene M. Prazma, Ph.D.,
Kathleen S. Buaron, B.S.N., and Steven J. Pascoe, M.B., B.S.,
for the AUSTRI Investigators*

Segurança dos LABA em adolescentes e adultos

11679 asmáticos > 12 anos

O risco de crise grave foi 21% inferior no grupo Flut+Salmet

SET 2016

Safety of Adding Salmeterol to Fluticasone Propionate in Children with Asthma

David A. Stempel, M.D., Stanley J. Szeffler, M.D., Søren Pedersen, Dr.Med.,

Segurança dos LABA em crianças > 4 anos

6208 crianças de 4 a 11 anos

Crise grave

- sob Flut+Salm 265 (8.5%) 27 internados
- sob Flut 309 (10%) 21 internados

O risco de crise grave foi semelhante nos 2 grupos

A associação de salmeterol à Fluticasona não aumentou o risco de crise grave

Montelukast



Cochrane Database of Systematic Reviews

Out 2013

Addition of anti-leukotriene agents to inhaled corticosteroids in children with persistent asthma (Review)

Chauhan BF, Ben Salah R, Ducharme FM

1. Poucos estudos em crianças
2. Sem dados no pré-escolar
3. Ensaio inconsistentes
4. Conclusões limitadas

1. **Sem evidência de segurança e eficácia na redução de crises** (além dos ICS)
2. **Não evita CTC oral nas crises nem hospitalizações**
3. **Não é opção no step 3 para associar aos CTC inalados**

Corticoide inalado nas crises

THE LANCET F Martinez 2011

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Volume 377, No. 9766, p650-657, 19 February 2011

[Next Article >](#)

 Articles

Use of beclomethasone dipropionate as rescue treatment for children with mild persistent asthma (TREXA): a randomised, double-blind, placebo-controlled trial

Em crianças com asma persistente ligeira

Corticoide inalado intermitente



**Cochrane
Library**

Feb 2013

Cochrane Database of Systematic Reviews

Intermittent versus daily inhaled corticosteroids for persistent asthma in children and adults (Review)

Chauhan BF, Chartrand C, Ducharme FM

...low quality evidence...

Ainda não é altura para mudarmos para ICS intermitente na asma persistente

J Paediatr Child Health 2014

É inconclusiva a evidência sobre a eficácia do ICS intermitente vs diário tanto na criança como no adulto

Evid Based Med 2014

REVIEW

Open Access



Treatment of asthma in young children: evidence-based recommendations

Jose A. Castro-Rodriguez^{1*}, Adnan Custovic² and Francine M. Ducharme^{3,4}

CORTICÓIDE INALADO INTERMITENTE

No lactente e no pré-escolar com episódios recorrentes, moderados ou graves, de Pieira Viral Episódica

--- um corticoide inalado intermitente em alta dose, pode evitar o recurso a corticoide oral

Não se provou o efeito de doses baixas ou moderadas de corticoide inalado intermitente nas crises ligeiras

REVIEW

Open Access



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Corticóide inalado diário vs intermitente

No pré-escolar com asma, um corticoide inalado diário é superior ao intermitente no controlo global da doença.

... mas equivalente nas exacerbações

REVIEW

Open Access



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Jose A. Castro-Rodriguez^{1*}, Adnan Custovic² and Francine M. Ducharme^{3,4}

CORTICÓIDE INALADO DIÁRIO

Na pieira recorrente do pré-escolar, um corticoide inalado diário continua a ser a estratégia mais eficaz.

.... independentemente do fenótipo

... Incluindo a pieira viral episódica

... e sobretudo no asmático

REVIEW

Open Access

Treatment of asthma in young children: evidence-based recommendations



Jose A. Castro-Rodriguez^{1*}, Adnan Custovic² and Francine M. Ducharme^{3,4}

Associações de corticóide inalado
(com LABA ou LTRA)

Não há estudos publicados em lactentes ou pré-escolares sobre associações de ICS com LABA ou LTRA

REVIEW

Open Access



Treatment of asthma in young children: evidence-based recommendations

Jose A. Castro-Rodriguez^{1*}, Adnan Custovic² and Francine M. Ducharme^{3,4}

Corticoide inalado vs Montelukast

No pré-escolar com pieira recorrente ou asma
uma dose baixa de corticoide inalado diária
é superior ao MK

... na redução de sintomas, nas exacerbações e FP

REVIEW

Open Access



Treatment of asthma in young children: evidence-based recommendations

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Corticóide oral no início da crise de pieira viral

Na Pieira viral do pre-escolar, não está comprovada a eficácia de Corticoide Oral precoce

... dado pelos pais, em casa, p ex.

REVIEW

Open Access



Treatment of asthma in young children: evidence-based recommendations

Jose A. Castro-Rodriguez^{1*}, Adnan Custovic² and Francine M. Ducharme^{3,4}

Montelukast (vs placebo)

Não há evidência de benefício do MK
na terapêutica de manutenção ou intermitente
no pré-escolar com Pieira Viral Episódica

REVIEW

Open Access

Treatment of asthma in young children: evidence-based recommendations



Jose A. Castro-Rodriguez^{1*}, Adnan Custovic² and Francine M. Ducharme^{3,4}

Montelukast

Deve ser usado cautelosamente e em casos individuais

...há fenótipos não homogêneos de Pieira Viral Episódica

.... Subgrupos (genótipos?) de respondedores

REVIEW

Open Access



Treatment of asthma in young children: evidence-based recommendations

Jose A. Castro-Rodriguez^{1*}, Adnan Custovic² and Francine M. Ducharme^{3,4}

Segurança dos Corticóides Inalados

Recomendações 2016

Monitorizar o crescimento (há suscetibil indiv)

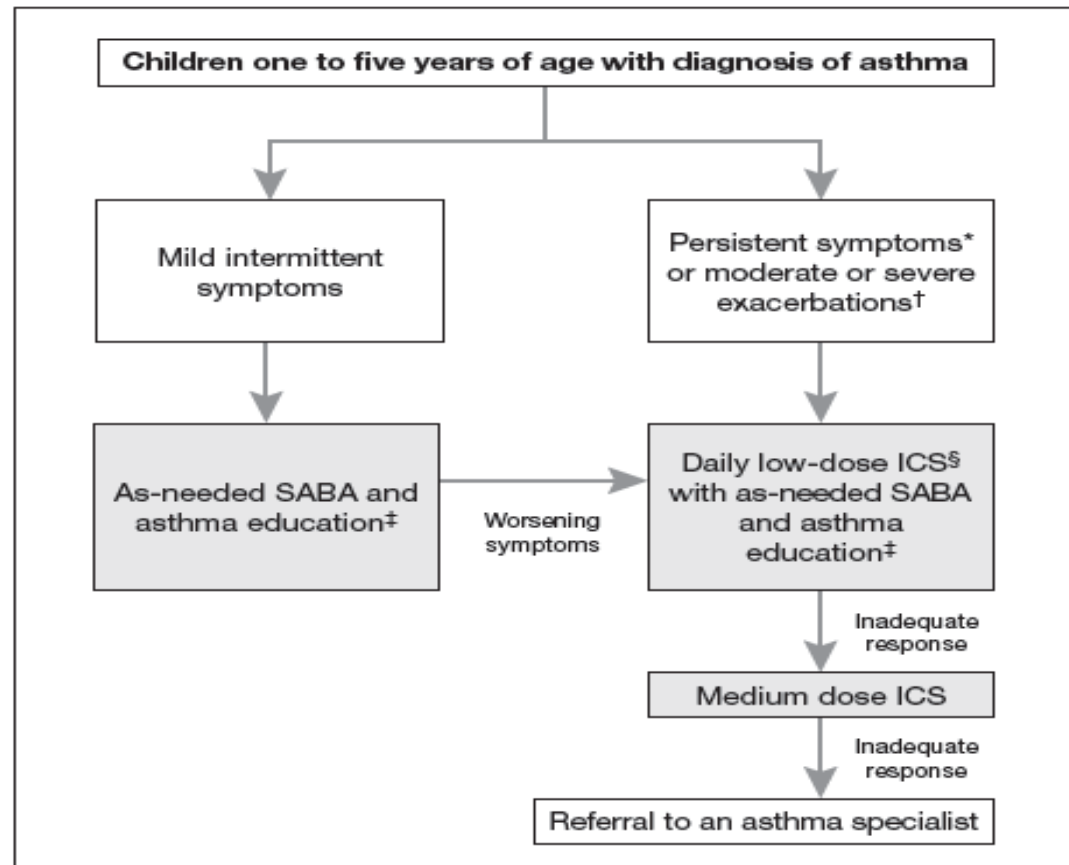
1. Reduzir a dose ao mínimo eficaz
2. Escolher o ICS com menor efeito no crescimento

Diagnosis and management of asthma in preschoolers: A Canadian Thoracic Society and Canadian Paediatric Society position paper

Francine M Ducharme MD MSc¹, Sharon D Dell MD², Dhenuka Radhakrishnan MD MSc³,
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Can Respir J
May/June 2015

Diagnosis and management of asthma in preschoolers



Esculápio diz o que pensa

- Tratar a doença é uma ciência
- Tratar o doente é uma arte
- Ser feliz com ambos é uma sorte

Pedro Mayer Garção. 3ª ed. 1976

