

XXX

CONGRESSO NAZIONALE  
SOCIETÀ ITALIANA DI PEDIATRIA  
PREVENTIVA E SOCIALE



BAMBINI DI IERI, OGGI E DOMANI...  
LA NOSTRA CARE, IL NOSTRO CUORE

TEATRO DI ORTIGIA • 7 - 10 GIUGNO 2018

SIRACUSA

Sistema Socio Sanitario



Regione  
Lombardia

ASST Fatebenefratelli Sacco

**X SESSIONE**

CONSENSUS

**CORTICOSTEROIDI INALATORI IN ETÀ EVOLUTIVA**

Presidente: **Marzia Duse**

Moderatori: **Gaetano Bellaro, Mario La Rosa**

**APPROPRIATA SOMMINISTRAZIONE DEI CSI**

Rinite

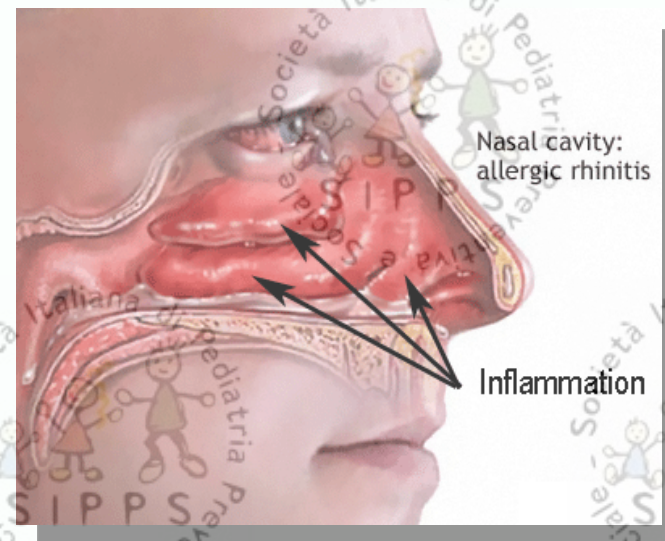
**Salvatore Barberi**

**casa**  
**pediatrica**

# BSACI guideline for the diagnosis and management of allergic and non-allergic rhinitis (Revised Edition 2017; First edition 2007)

## 2 | DEFINITIONS/CLASSIFICATION

Rhinitis describes inflammation of the nasal mucosa but is clinically defined by symptoms of nasal discharge, itching, sneezing and nasal blockage or congestion. When the conjunctivae are also involved, the term rhinoconjunctivitis is more accurate. Involvement of the sinus linings in more widespread disease is known as rhinosinusitis. Rhinitis has multiple phenotypes, usually divided into allergic, non-allergic and infective as well as mixed forms.





# Allergic Rhinitis and Its Impact on Asthma

Jean Bousquet, MD, PhD, Paul van Cauwenberge, MD, PhD, Nikolai Khaltaev, MD

**TABLE 2: Classification of rhinitis**

- Infectious
  - Viral
  - Bacterial
  - Other infectious agents
- Allergic
  - Intermittent
  - Persistent
- Occupational (allergic and non-allergic)
  - Intermittent
  - Persistent
- Drug-induced
  - Aspirin
  - Other medications
- Hormonal
- Other causes
  - NARES
  - Irritants
  - Food
  - Emotional
  - Atrophic
  - Gastroesophageal reflux
- Idiopathic

## 2.2 Infective rhinitis

Any cause of congestion of the nasal mucosa can lead to occlusion of the sinus ostia, predisposing to acute rhinosinusitis and/or Eustachian tube dysfunction.

# DEFINIZIONE DI RINITE ALLERGICA



Patologia della mucosa nasale indotta da un' infiammazione IgE-mediata conseguente all'esposizione allergenica.

E' caratterizzata clinicamente da rinorrea, starnuti, prurito e ostruzione, reversibili spontaneamente o in seguito a terapia.



# Le ragioni per creare linee guida per la gestione della rinite allergica



- La rinite allergica è un problema sanitario globale che colpisce dal 5 al 35 % della popolazione.
- La sua prevalenza è tendenzialmente in aumento.
- Pur non essendo sempre una malattia grave, la rinite influisce sulla vita sociale ed altera le prestazioni scolastiche e lavorative.
- I costi socio sanitari sono rilevanti.
- La rinite si associa spesso all'asma e costituisce fattore di rischio per la sua insorgenza. Oltre all'asma possono associarsi alla rinite numerose altre co-morbilità.
- La divulgazione e l'applicazione delle linee guida sono in grado di migliorare la gestione dei pazienti.

# PREVALENZA A LIVELLO MONDIALE NEL BAMBINO



6-7 anni

★ ≥ 10%

◆ ≥ 5% - < 10%

■ < 5%

ITALIA: 5 – 15%

Figure 3. Map of prevalence of current symptoms of rhinoconjunctivitis, 6- to 7-year age categories of  $\geq 10\%$  (red stars),  $\geq 5$  to  $< 10\%$  (yellow diamonds) and  $< 5\%$  (blue squares).

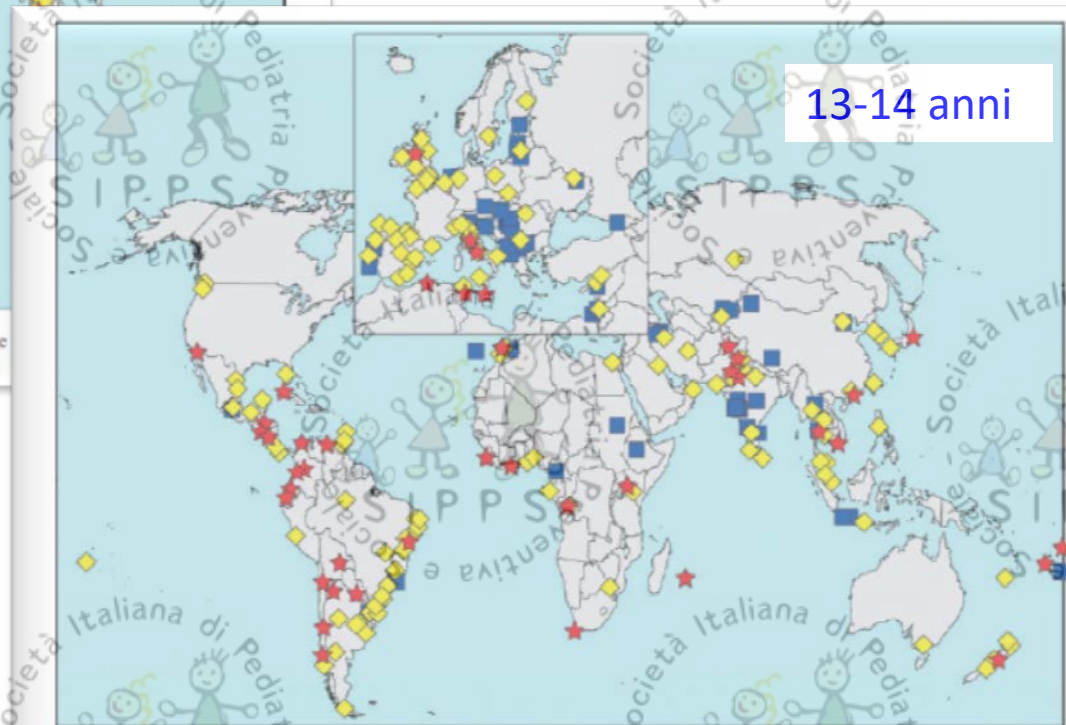
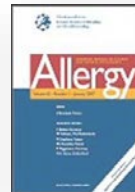
Allergy 2009; 64:128-148

© 2009 The Authors  
Journal compilation © 2009 Blackwell Munksgaard  
DOI: 10.1111/j.1398-9995.2008.01854.x

Original article

Global map of the prevalence of symptoms of rhinoconjunctivitis in children: The International Study of Asthma and Allergies in Childhood (ISAAC) Phase Three

N. Ait-Khaled<sup>1</sup>, N. Pearce<sup>2</sup>,  
H. R. Anderson<sup>3</sup>, P. Ellwood<sup>4</sup>,  
S. Montefon<sup>5</sup>, J. Shah<sup>6</sup>, and the  
ISAAC Phase Three Study Group\*



13-14 anni

Figure 1. Map of prevalence of current symptoms of rhinoconjunctivitis, 13- to 14-year age group. Symbols indicate prevalence categories of  $\geq 20\%$  (red stars),  $\geq 10$  to  $< 20\%$  (yellow diamonds) and  $< 10\%$  (blue squares).





**A**llergic  
**R**hinitis and its  
**I**mpact on  
**A**sthma

**PROGETTO MONDIALE ARIA.  
AGGIORNAMENTO ITALIA**

Linee-Guida Italiane  
Firenze, 9 Marzo 2017



WHO Participant

## Intermittente

- < 4 giorni/settimana
- o < 4 settimane

## Persistente

- > 4 giorni/settimana
- e > 4 settimane

## Lieve

### Tutte le seguenti

- Sono conservato
- Nessuna limitazione nelle attività quotidiane
- Normale attività lavorativa o scolastica
- Non sintomi fastidiosi

## Moderata-grave

### uno o più dei seguenti

- Alterazioni del sonno
- Limitazioni delle attività quotidiane
- Riduzione prestazioni lavorative/scolastiche
- Sintomi gravi

Nei pazienti non trattati





**A**llergic  
**R**hinitis and its  
**I**mpact on  
**A**sthma

**PROGETTO MONDIALE ARIA.  
AGGIORNAMENTO ITALIA**

Linee-Guida Italiane  
Firenze, 9 Marzo 2017

### DEFINIZIONE

La rinite allergica può sovrapporsi a quadro infettivo con diversa prevalenza a seconda dell'età

**Allergic rhinitis**

**Infectious rhinitis**

**Pre-school**

**School**

**Adolescent**

Rhinitis symptoms that are associated with exposure to an allergen to which the patient is sensitized.

Secondary to infection

# Sintomi tipici e non tipici di rinocongiuntivite allergica



**A**llergic  
**R**hinitis and its  
**I**mpact on  
**A**sthma

PROGETTO MONDIALE ARIA.  
AGGIORNAMENTO ITALIA

Linee-Guida Italiane  
Firenze, 9 Marzo 2017

## SINTOMI TIPICI DI RINITE ALLERGICA

- rinorrea acquosa
- starnuti a salve
- ostruzione nasale
- prurito nasale
- congiuntivite concomitante

## SINTOMI TIPICI DI CONGIUNTIVITE ALLERGICA

- sintomi di rinite concomitante
- sintomi bilaterali
- lacrimazione
- prurito congiuntivale
- iperemia

## SINTOMI NON TIPICI DI RINITE ALLERGICA

- sintomi unilaterali
- ostruzione nasale isolata
- rinorrea mucopurulenta
- rinorrea posteriore isolata
- dolore, anosmia
- epistassi ricorrenti

## SINTOMI NON TIPICI DI CONGIUNTIVITE ALLERGICA

- completa assenza di rinite
- sintomi unilaterali
- fotofobia
- bruciore oculare o dolore
- secchezza della congiuntiva



# DIAGNOSI ALLERGOLOGICA

Test di provocazione

Dieta di eliminazione

Test in vitro

Test in vivo

Esame obiettivo

Anamnesi accurata

Iter diagnostico







# DIAGNOSI ALLERGOLOGICA

- **Anamnesi ed Esame obiettivo**

- **Indagini allergologiche**

**in vivo**

- Skin Prick Test, Prick by Prick, Patch test, tests di provocazione

**in vitro**

- Dosaggio IgE specifiche
- Dosaggio mediatori citochine, LT.
- Diagnosi molecolare

**A**llergic  
**R**hinitis and its  
**I**mpact on  
**A**sthma

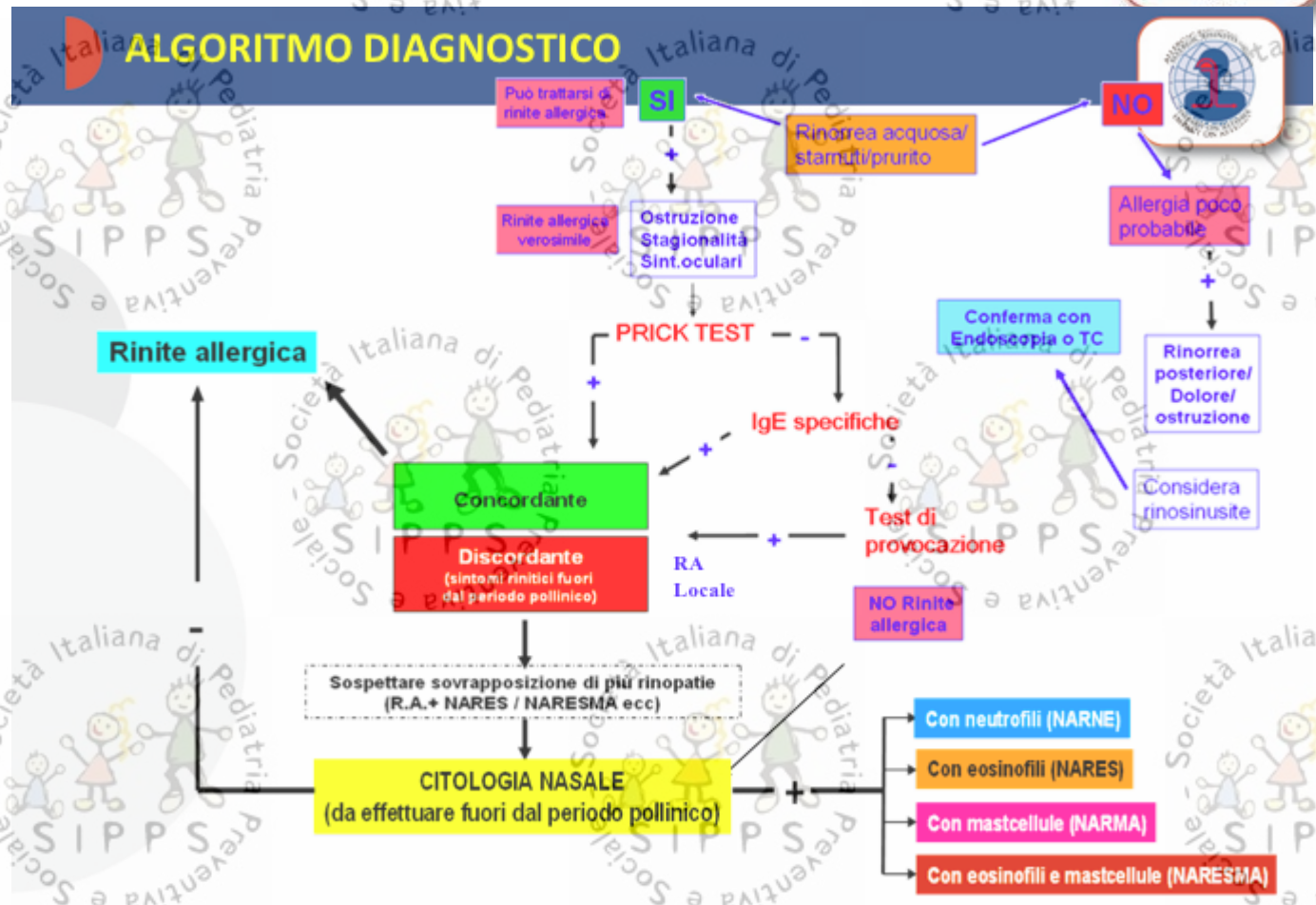


**PROGETTO MONDIALE ARIA.  
AGGIORNAMENTO ITALIA**

Linee-Guida Italiane  
Firenze, 9 Marzo 2017

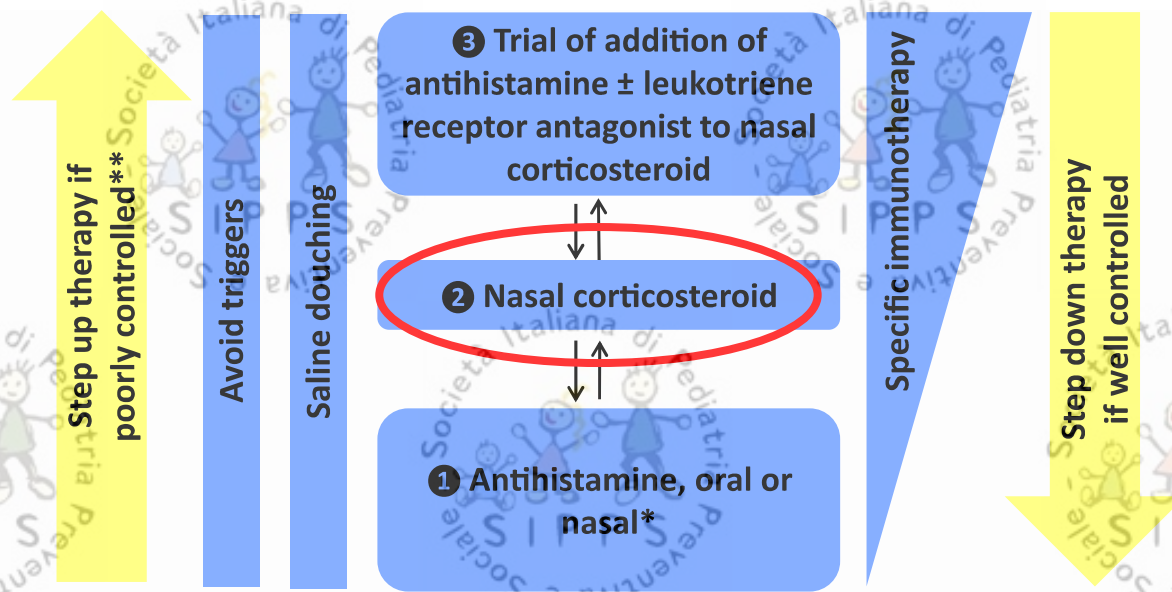


## ALGORITMO DIAGNOSTICO



DA: Journal of Allergy and Clinical Immunology (10.1016/j.jaci.2012.02.032 ), modificato

# Aspetti speciali: terapia in pediatria



**Figure 3** Approach to therapy for paediatric allergic rhinitis. ①, ② and ③ are potential entry points into therapeutic approach depending on the severity of the rhinitis symptoms. For seasonal disease, regular therapy should be commenced 2 weeks before the anticipated start of symptoms (150). \*Oral antihistamines may be better tolerated, whilst intranasal antihistamines have a more rapid onset

of action. \*\*Reconsider diagnosis if not controlled within 1-2 weeks (61). If less than 2 years of age and do not respond to antihistamine within a week, reconsider diagnosis before stepping up therapy. If poorly controlled, consider a short rescue course of a decongestant or low-dose oral prednisolone to gain symptom control; topical ipratropium may be useful for rhinorrhoea.

Antistaminici orali di seconda generazione possono essere utilizzati dal secondo anno di vita

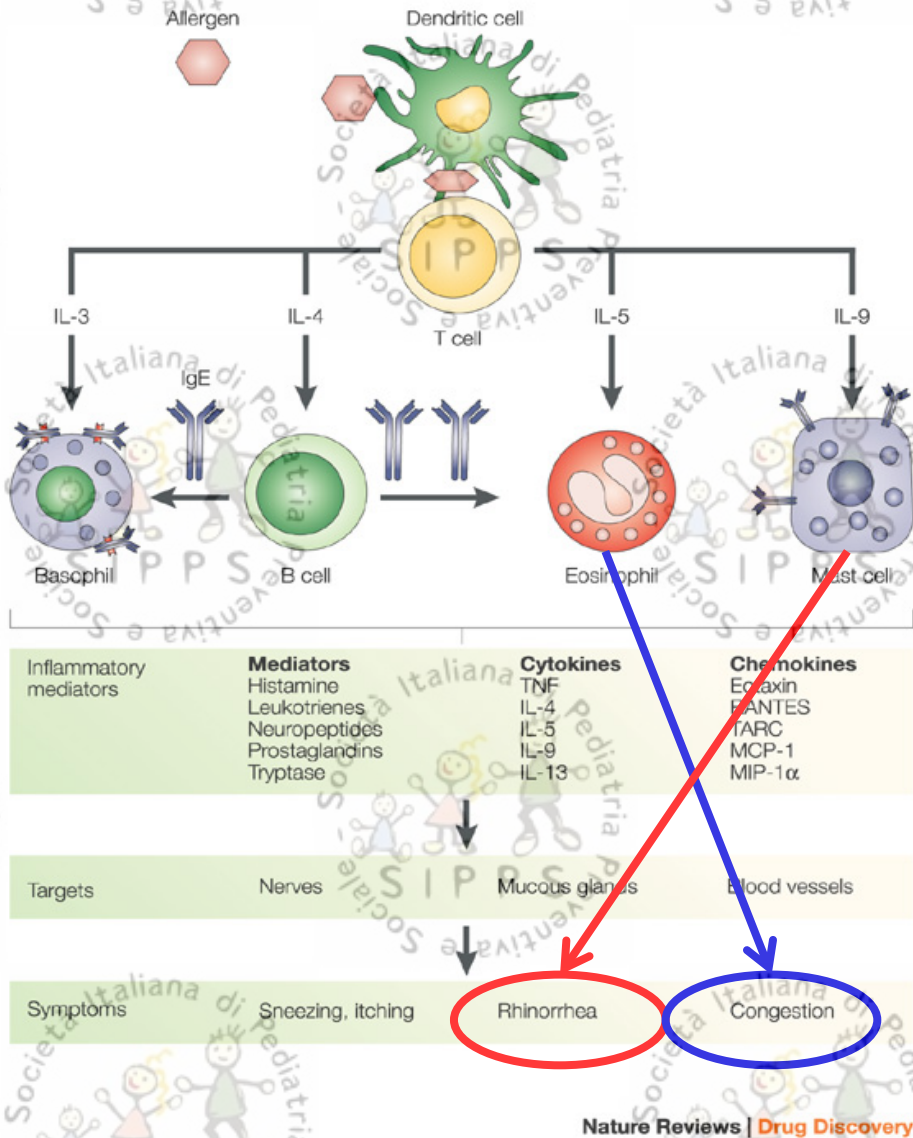
Antistaminici nasali possono essere utilizzati dal 12° anno di vita

Steroidi nasali possono essere utilizzati dal sesto anno di vita (registrazione italiana); questa position paper suggerisce che dovrebbero essere utilizzati dopo i due anni di vita.

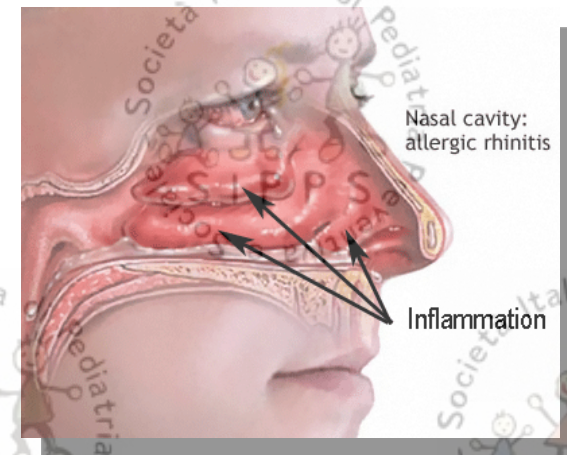
Antileucotrienici possono essere utilizzati specialmente in caso di asma associato



# Rinite allergica : patogenesi



Cell and mediator pathways underlying the pathogenesis of allergic rhinitis.



Stephen T. Holgate & David Broide  
Nature Reviews Drug Discovery  
2, 903-915 (November 2003)

# TRATTAMENTI FARMACOLOGICI



Gli antistaminici di II generazione sono efficaci su rinorrea, starnuti e prurito. Alcuni di essi possiedono attività antinfiammatorie e agiscono in parte anche sull'ostruzione.

*Nayak, Allergy 2001; Wilson, Allergy 2002; Simons, JACI 2003; Potter, Allergy 2003; Hore, Clin Exp Allergy 2005*

I corticosteroidi nasali sono efficaci sull'ostruzione. Il massimo effetto richiede 24-48 ore, ma possono agire sui sintomi già a partire dalle 12 ore circa.

*Jen, Ann Allergy Asthma Immunol 2000; Denkwicz, JACI 2003*

**Alcuni corticosteroidi nasali** (beclometasone dipropionato, mometasone furoato e fluticasone furoato) hanno mostrato di poter migliorare anche gli eventuali sintomi oculari concomitanti.

*Kaiser et al. JACI 2007;119; Bielory Ann Allergy 2008; Weinstein et al., Allergy Asthma Proc.2014*

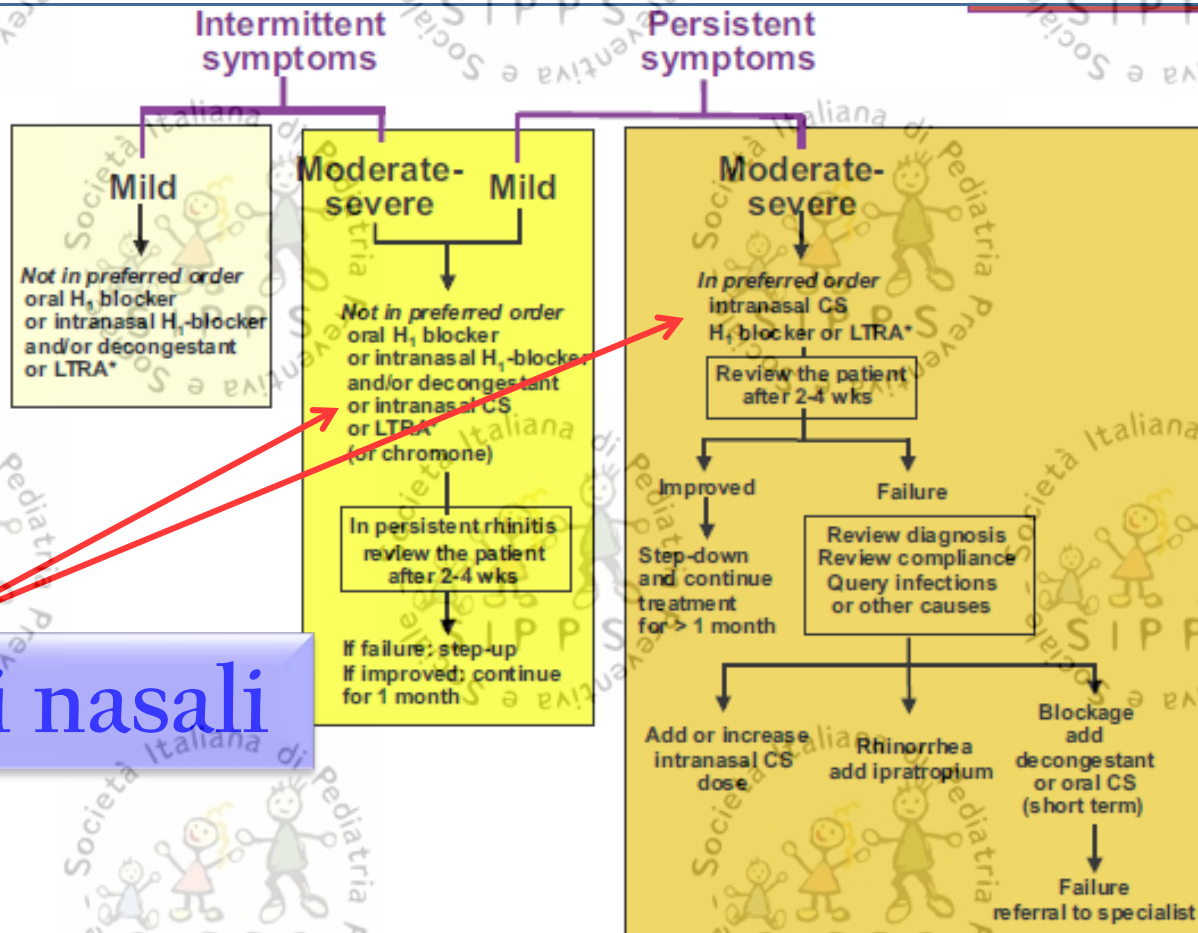
# FORZA DELLE RACCOMANDAZIONI PER ALCUNI FARMACI PER LA RINITE ALLERGICA



FARMACO	RINITE STAGIONALE		RINITE PERENNE**	
	ADULTI	BAMBINI	ADULTI	BAMBINI
Antistaminico orale	A	A	A	A
Antistaminico nasale	A	A	A	A
Antistaminico oculare	A	A	B	B
<b>Steroide nasale</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
Steroide orale	A	B	B	B
Steroide i.m.	A	B	B	B
Cromone nasale	A	A	A	B
Cromone oculare	A	A	B	B
NAAGA oculare	B	C	C	C
Decongestionante nasale	C	C*	C	C*
Decongestionante orale	A			
Decongestionante orale + antiH1	A	B*	B	B*
Anticolinergico			A	A



# Allergic Rhinitis and its Impact on Asthma (ARIA): Achievements in 10 years and future needs



**Steroidi nasali**

BOUSQUET ET AL

J ALLERGY CLIN IMMUNOL  
NOVEMBER 2012

Allergen and irritant avoidance may be appropriate

**If conjunctivitis**

Add oral H1-blocker or intraocular H1-blocker or intraocular cromone (or saline)

Consider specific immunotherapy

CLINICAL PRACTICE

Caren G. Solomon, M.D., M.P.H., Editor

## Allergic Rhinitis

Lisa M. Wheatley, M.D., M.P.H., and Alkis Togias, M.D.

### KEY CLINICAL POINTS

#### ALLERGIC RHINITIS

- An estimated 15 to 30% of patients in the United States have allergic rhinitis, a condition that affects productivity and the quality of life in children and adults.
- Allergic rhinitis frequently coexists with asthma and other allergic diseases; most people with asthma have rhinitis.
- Intranasal glucocorticoids are generally the most effective therapy; oral and nasal antihistamines and leukotriene-receptor antagonists are alternatives. However, many patients do not obtain adequate relief with pharmacotherapy.
- Allergen immunotherapy should be used in patients with refractory symptoms or in those for whom pharmacotherapy is associated with unacceptable side effects.
- Two forms of allergen immunotherapy are now available: subcutaneous injections and rapidly dissolving sublingual tablets, the latter limited in the United States to the treatment of grass and ragweed allergy. Both forms of therapy generally provide sustained efficacy after the cessation of treatment.



# BSACI guideline for the diagnosis and management of allergic and non-allergic rhinitis (Revised Edition 2017; First edition 2007)

## RHINITIS IN CHILDREN

- The approach to diagnosis in children is similar to that in adults: history, skin prick test and anterior rhinoscopy
- Ertopy (local allergic rhinitis), diagnosed by nasal allergen challenge is found in this age group (level D)<sup>331,333</sup>
- Therapy of rhinitis in children is based on the same principles as in adults; however, it should take into account specific paediatric needs, such as acceptability, practicality for both children and parents and concern for potential side-effects (Figure 8)

- Nasal saline irrigation is effective in the treatment of AR in children<sup>149,334</sup>
- Brief concomitant use (3 days) of topical decongestants can be helpful in children with significant nasal blockage to aid introduction of topical nasal steroid therapy
- Recommendation for continuous use of intranasal steroids can often create anxiety in parents; intranasal steroids with low bioavailability have a better safety profile at recommended doses and should be used in preference (Figure 4)<sup>335,336</sup>
- It is advisable to monitor growth in children, especially if they are receiving steroids by multiple routes<sup>335</sup> (see also Table 3)
- A short course (3 to 7 days) of oral corticosteroids may be required in severe cases. Intramuscular steroids have no role in the treatment of AR
- Immunotherapy is recommended in subjects who have not adequately responded to maximal pharmacotherapy; the potential added benefit in disease prevention should be considered when treating children<sup>337,338</sup>
- Education on therapy plays an important role on treatment outcome. Both children and carers should be provided with the relevant information and appropriate training<sup>339</sup>
- Otitis media with effusion and/or adenoidal hypertrophy may be associated with AR; the mechanistic link is unknown. Some studies suggest benefit to these common paediatric conditions from rhinitis treatment<sup>340</sup>

## Paediatric rhinitis: position paper of the European Academy of Allergy and Clinical Immunology

G. Roberts<sup>1,2</sup>, M. Xatzipsalti<sup>3</sup>, L. M. Borrego<sup>4,5</sup>, A. Custovic<sup>6</sup>, S. Halken<sup>7</sup>, P. W. Hellings<sup>8</sup>, N. G. Papadopoulos<sup>9</sup>, G. Rotiroli<sup>10,11</sup>, G. Scadding<sup>10</sup>, F. Timmermans<sup>12</sup> & E. Valovirta<sup>13</sup>

### Intranasal corticosteroids

Corticosteroids address the inflammatory component of AR, and results from a large number of well-designed studies would recommend their use in children and adolescents from 2 years (77–91) (A). The recent Cochrane review (92) failed to find evidence supporting the effectiveness of intranasal corticosteroids but it excluded all the recent high-quality randomized controlled trials as they allowed rescue medication. Several studies have shown that the effects of mometasone, fluticasone and ciclesonide commence within a day of starting therapy (93). Intranasal corticosteroids probably also improve coexisting asthma (94–96) (A), and fluticasone furoate and mometasone may be effective for conjunctivitis (77, 82, 97) (B).

In general, nasal corticosteroids are well tolerated. Newer, once-daily products (e.g. fluticasone propionate (98), mometasone (99–101), fluticasone furoate nasal spray (82)) are preferred as these have been shown, unlike beclomethasone, not impair growth velocity albeit only after a year of therapy (102, 103) (A). This is probably due to the much lower systemic bioavailability of the newer products (Fig. 2). Nasal perforation and epistaxis have been described as risks of nasal corticosteroids but there are no systematically collected data on these adverse effects in the literature.

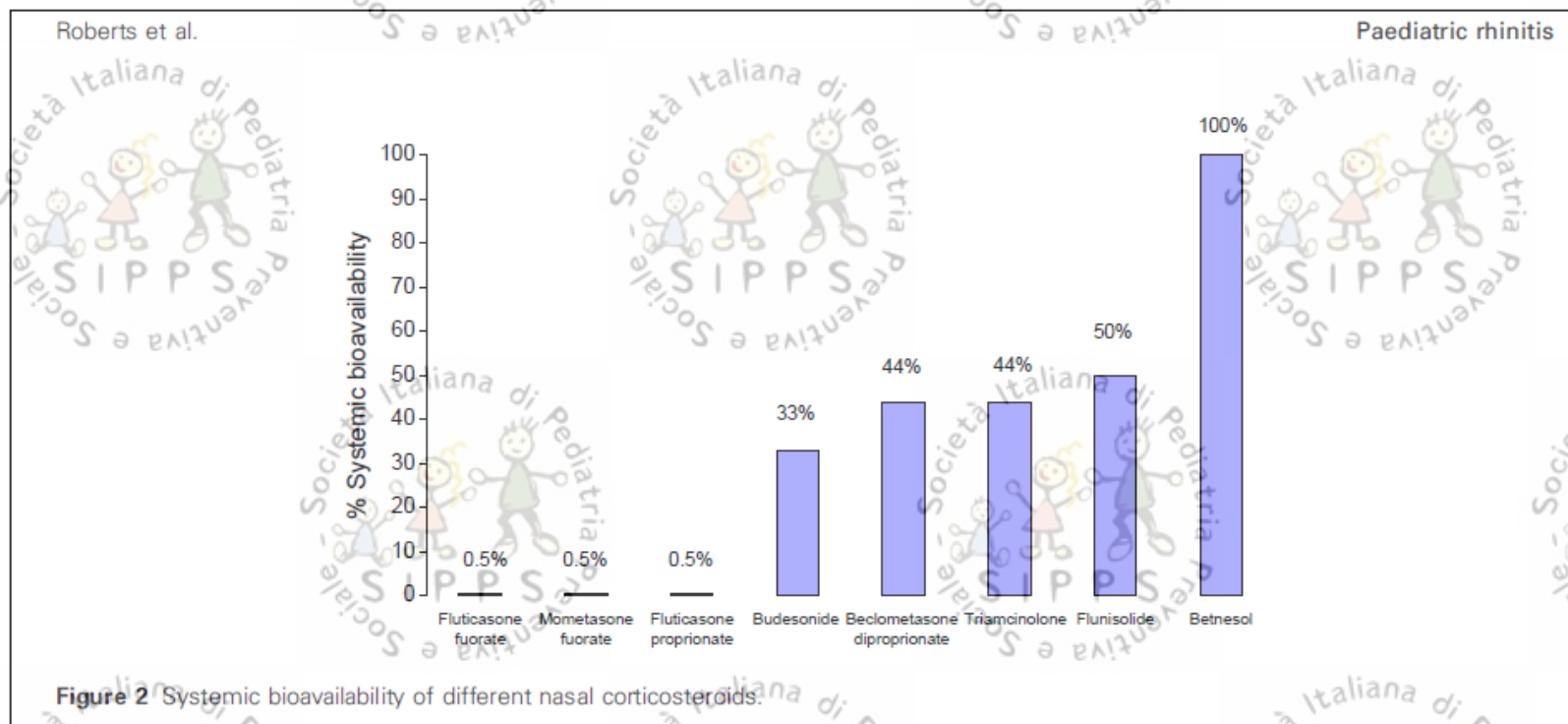
### Systemic corticosteroids

A few studies on systemic corticosteroid therapy have been performed in adults. In adults, a daily 7.5 mg prednisolone dose was marginally effective, whereas a 30 mg dose was effective but also associated with systemic side-effects (104). Depot corticosteroid injections are associated with local atrophy of the skin and muscles, reduced bone mineralization and impaired growth (105). If systemic corticosteroid treatment is necessary in children, a short course with 10–15 mg oral prednisolone a day for 3–7 days for school-age children may be sufficient (D).



# Paediatric rhinitis: position paper of the European Academy of Allergy and Clinical Immunology

G. Roberts<sup>1,2</sup>, M. Xatzipsalti<sup>3</sup>, L. M. Borrego<sup>4,5</sup>, A. Custovic<sup>6</sup>, S. Halken<sup>7</sup>, P. W. Hellings<sup>8</sup>, N. G. Papadopoulos<sup>9</sup>, G. Rotiroli<sup>10,11</sup>, G. Scadding<sup>10</sup>, F. Timmermans<sup>12</sup> & E. Valovirta<sup>13</sup>





Letter to the Editor

## Nasal budesonide efficacy for nasal nitric oxide and nasal obstruction in rhinitis

Giuliana Ferrante, Salvatore Fasola, Giovanna Cilluffo, Velia Malizia, Laura Montalbano, Massimo Landi, Giovanni Passalacqua, Stefania La Grutta ✉

To the Editor,

**Nasal nitric oxide (nNO)** is a non-invasive tool that may be helpful in evaluating the inflammatory status in the upper airways (1). Previous studies report that nNO is elevated in children with allergic rhinitis (AR) (2), especially in perennial sensitized subjects (3), and that it may be affected by topical administration of intranasal steroids (INSs) (4).

Clinical studies reported that intranasal budesonide is effective on AR symptoms (5), whereas no data about its effect on nNO in children with persistent allergic rhinitis (PAR) are available to date.

**Including nasal cytology (NC)** into the diagnostic process may allow to detect and discriminate the cellular components involved in the inflammatory response in AR (6).

At first, we found that children with PAR treated with a 3-week course of nasal budesonide **showed a significant change in nNO levels at the end of the treatment period**, in comparison with children treated with nasal saline solution. This result is in

demonstrated in clinical studies (5). Accordingly, our results showed a global improvement in T5SS scores, as the result of specific improvement **in all the nasal symptoms**; in particular, the score relevant to nasal congestion improved significantly more for children in the NB group after the treatment period. **Changes for all the other symptom scores, nasal eosinophil count, and PSQI total score** were also observed, even though they did not reach statistical significance.



# Velocità di crescita e steroidi nasali

Ann Allergy Asthma Immunol .2006 May;96(5):723-30.

**Growth velocity in children with perennial allergic rhinitis treated with budesonide aqueous nasal spray.**

*Murphy K et al.*

## **METHODS:**

In this double-blind, placebo-controlled, multicenter study, 229 prepubertal children (mean age, 5.9 years; age range, 4-8 years) with perennial AR were randomized (2:1) to receive budesonide aqueous nasal spray, 64 microg (32 microg per nostril) once daily, or placebo for 1 year. The change from baseline in growth velocity, height after treatment, and the percentage of patients whose percentile for height decreased from baseline to the end of treatment were evaluated.

## **CONCLUSIONS:**

Treatment with budesonide aqueous nasal spray, 64 microg once daily, for 1 year did not suppress growth velocity compared with placebo and was well tolerated in prepubertal children with perennial AR.

Allergy 2008 Oct;63(10):1292-300.

**Molecular and clinical pharmacology of intranasal corticosteroids: clinical and therapeutic implications.**

*Derendorf H, Meltzer EO*

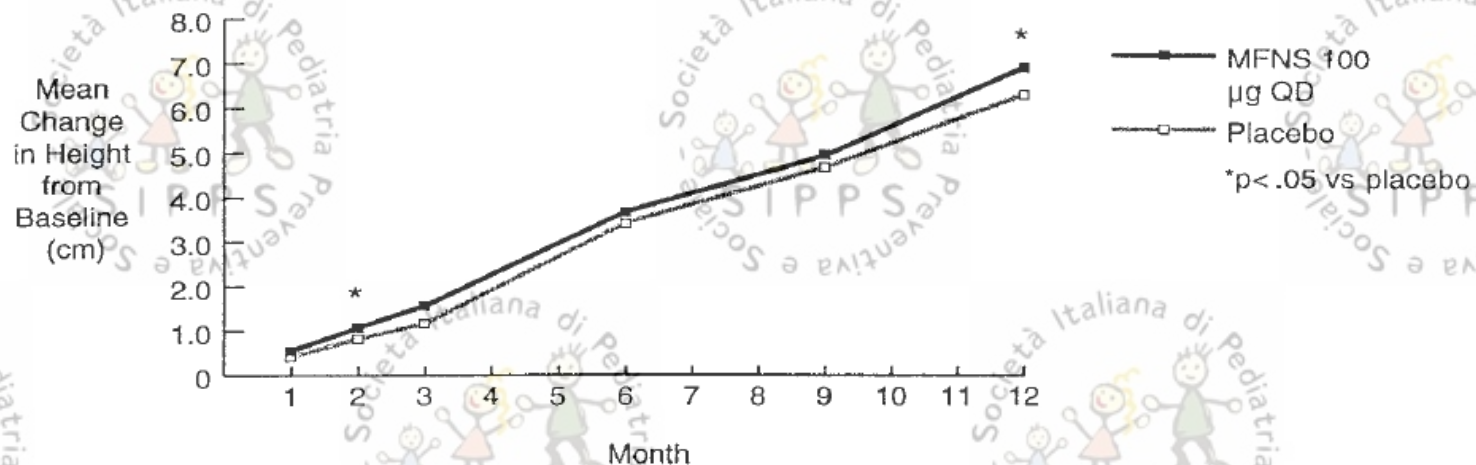
Studies, including 1-year studies with mometasone furoate, fluticasone propionate, and budesonide that evaluated potential systemic effects of INs in children have generally found no adverse effects on hypothalamic-pituitary-adrenal axis function or growth. **Clinical data suggest no significant differences in efficacy between the INs.**

Theoretically, newer agents with lower systemic availability may be preferable, and may come closer to the pharmacokinetic/pharmacologic criteria for the ideal therapeutic choice.



# Absence of Growth Retardation in Children With Perennial Allergic Rhinitis After One Year of Treatment With Mometasone Furoate Aqueous Nasal Spray

Eric J. Schenkel, MD\*; David P. Skoner, MD‡; Edwin A. Bronsky, MD§; S. David Miller, MD||; David S. Pearlman, MD¶; Anthony Rooklin, MD#; James P. Rosen, MD\*\*; Michael E. Ruff, MD‡‡; Mark L. Vandewalker, MD§§; Alan Wanderer, MD|||; Chandrasekharrao V. Damaraju, PhD¶¶; Keith B. Nolop, MD¶¶¶; and Barbara Mesarina-Wicki, MD¶¶¶



**Conclusions.** In summary, 1 year of treatment with MFNS 100 µg QD was found to be well tolerated, with no evidence of retardation of growth or suppression of HPA-axis function in perennial allergic rhinitis subjects as young as 3 years of age. These findings may be par-

# Efficacy and safety of beclomethasone dipropionate nasal aerosol in children with perennial allergic rhinitis

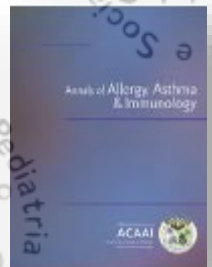
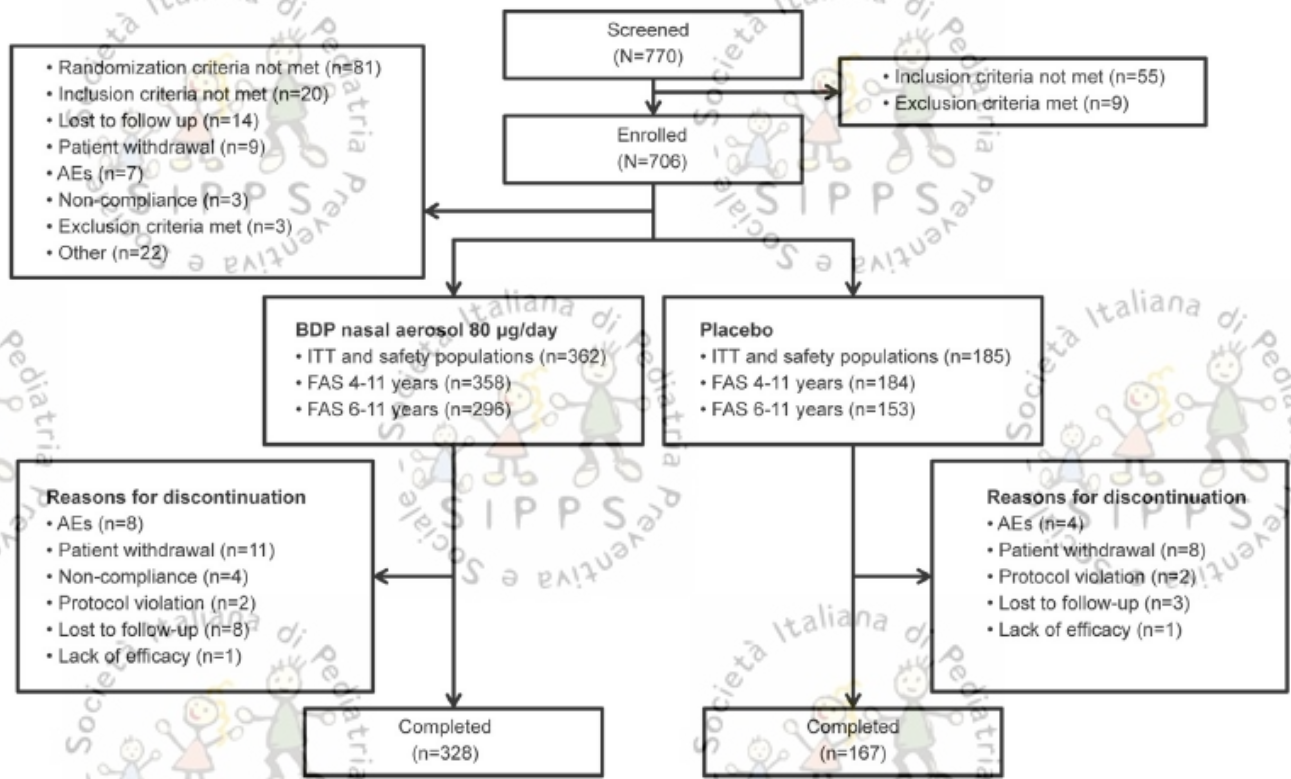


CrossMark

William E. Berger, MD<sup>\*</sup>; Robert L. Jacobs, MD<sup>†</sup>; Niran J. Amar, MD<sup>‡</sup>; Sudeesh K. Tantry, PhD<sup>§</sup>; Jiang Li, MS<sup>§</sup>; and Calvin J. Small, MD, MS<sup>§</sup>

**Background:** Beclomethasone dipropionate (BDP) nasal aerosol (non-aqueous) is approved for management of seasonal and perennial allergic rhinitis (PAR) in adolescents and adults.

**Objective:** To evaluate the efficacy and safety of BDP nasal aerosol at 80 µg/day in children with PAR.



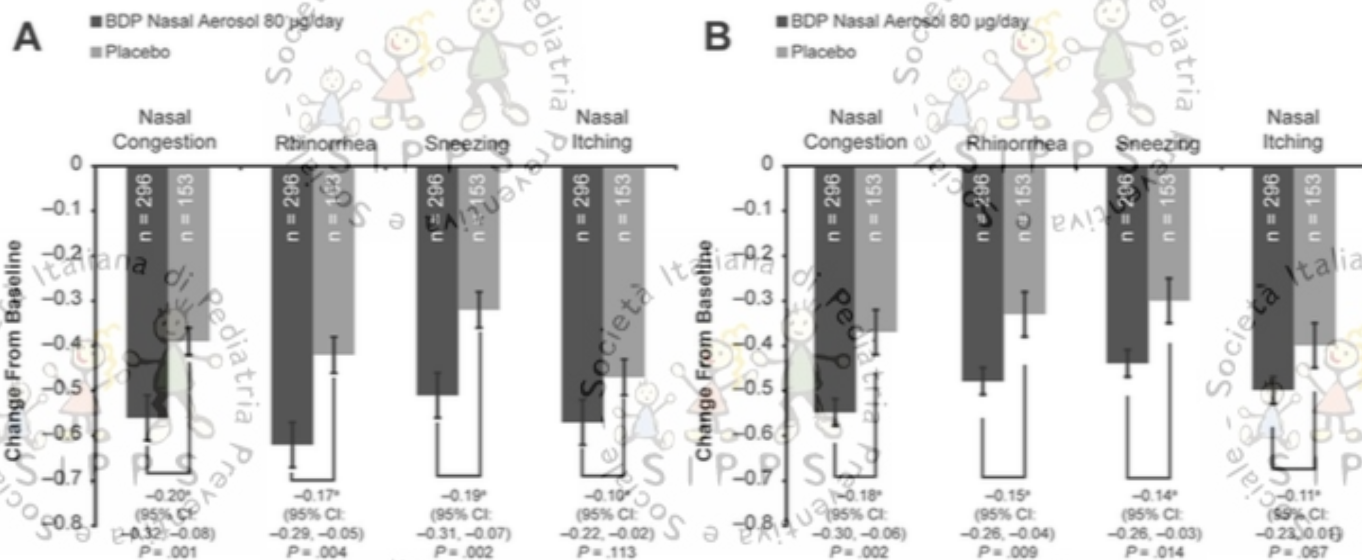


# Efficacy and safety of beclomethasone dipropionate nasal aerosol in children with perennial allergic rhinitis



CrossMark

William E. Berger, MD<sup>\*</sup>; Robert L. Jacobs, MD<sup>†</sup>; Niran J. Amar, MD<sup>‡</sup>; Sudeesh K. Tantry, PhD<sup>§</sup>; Jiang Li, MS<sup>§</sup>; and Calvin J. Small, MD, MS<sup>§</sup>



**Results:** Improvements were significantly greater with BDP nasal aerosol than with placebo during the first 6 weeks of treatment in children 6 to 11 years old in average morning and evening rTNSS and iTNSS (mean treatment difference  $-0.66$  [ $P = .002$ ] and  $-0.58$  [ $P = .004$ ], respectively). Improvements in average morning and evening rTNSS and iTNSS also were significantly greater in patients 4 to 11 years receiving BDP nasal aerosol than with placebo during the first 6 weeks of treatment ( $P = .002$  and  $P = .004$ , respectively). Similar improvements were seen during 12 weeks of treatment. The safety profile of BDP nasal aerosol was comparable to that of placebo.

**Conclusion:** The BDP nasal aerosol at 80 µg/day in children 4 to 11 years old was well tolerated and effective in controlling nasal symptoms of PAR.



## Efficacy of MP-AzeFlu in children with seasonal allergic rhinitis: Importance of paediatric symptom assessment

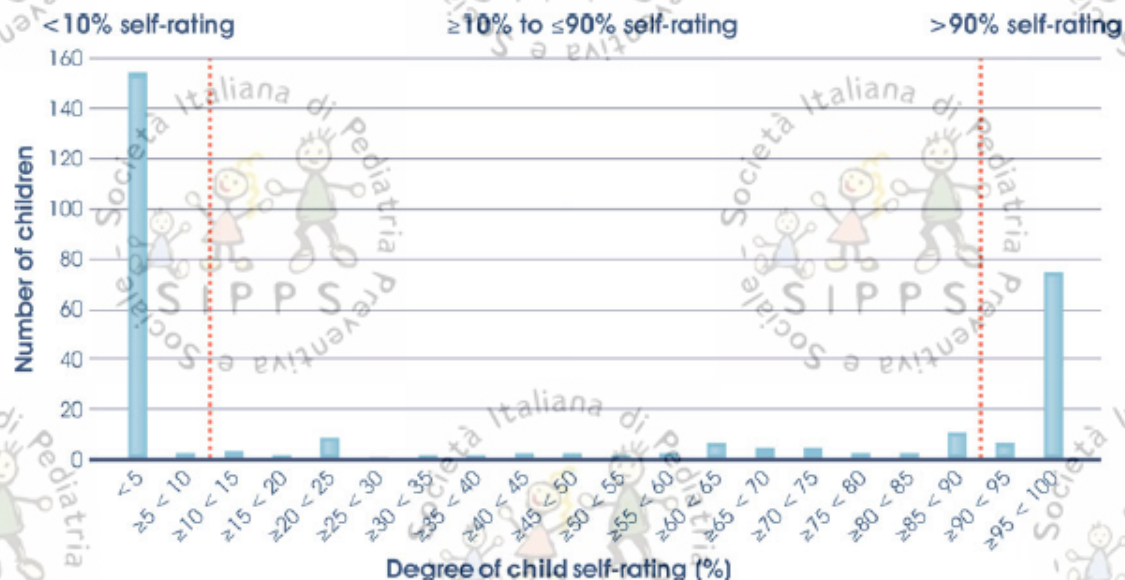
William Berger<sup>1,2</sup>, Eli O. Meltzer<sup>3</sup>, Niran Amar<sup>4</sup>, Adam T. Fox<sup>5</sup>, Jocelyne Just<sup>6,7</sup>, Antonella Muraro<sup>8</sup>, Antonio Nieto<sup>9</sup>, Erkkä Valovirta<sup>10</sup>, Magnus Wickman<sup>11,12</sup> & Jean Bousquet<sup>13,14,15,16</sup>

**Background:** This study aimed to assess the efficacy of MP-AzeFlu (a novel intranasal formulation of azelastine hydrochloride and fluticasone propionate in a single spray) in children with seasonal allergic rhinitis (SAR) and explore the importance of child symptom severity assessment in paediatric allergic rhinitis (AR) trials.

**Methods:** A total of 348 children (4–11 years) with moderate/severe SAR were randomized into a double-blind, placebo-controlled, 14-day, parallel-group trial. Efficacy was assessed by changes from baseline in reflective total nasal symptom score (rTNSS), reflective total-ocular symptom score (rTOSS) and individual symptom scores over 14 days (children 6–11 years; n = 304), recorded by either children or caregivers. To determine whether a by-proxy effect existed, efficacy outcomes were assessed according to degree of child/caregiver rating. Moreover, total Paediatric Rhinitis Quality of Life Questionnaire (PRQLQ) score was compared between the groups.

## Efficacy of MP-AzeFlu in children with seasonal allergic rhinitis: Importance of paediatric symptom assessment

William Berger<sup>1,2</sup>, Eli O. Meltzer<sup>3</sup>, Niran Amar<sup>4</sup>, Adam T. Fox<sup>5</sup>, Jocelyne Just<sup>6,7</sup>, Antonella Muraro<sup>8</sup>, Antonio Nieto<sup>9</sup>, Erka Valovirta<sup>10</sup>, Magnus Wickman<sup>11,12</sup> & Jean Bousquet<sup>13,14,15,16</sup>



**Figure 2** Distribution of child symptom severity assessment rating.

**Conclusions:** MP-AzeFlu is an effective treatment for AR in childhood. Caregivers are less able than children to accurately assess response to treatment with available tools. A simple paediatric-specific tool to assess efficacy in AR trials in children is needed.



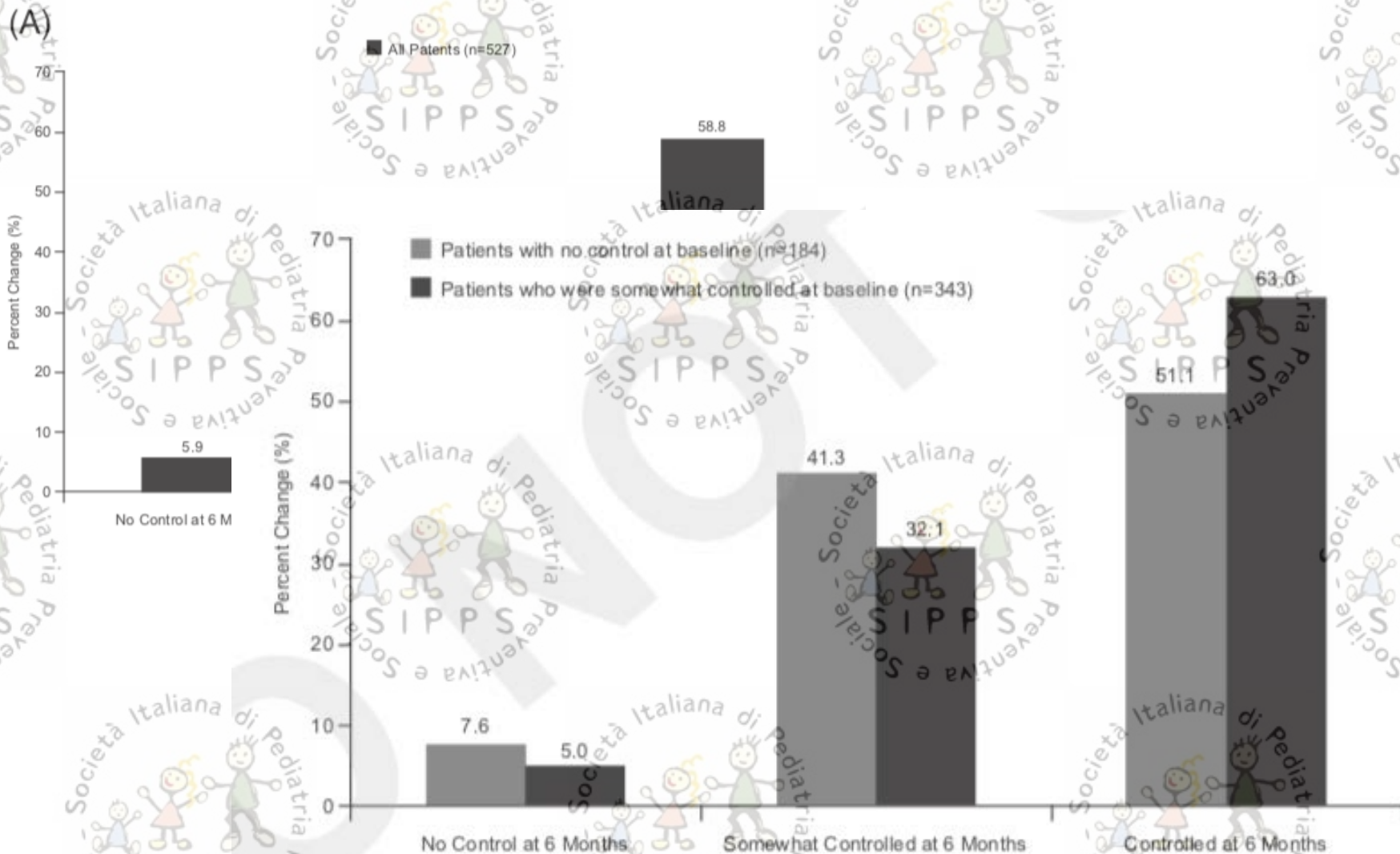
# Beclomethasone Dipropionate Nasal Aerosol in Patients with Perennial Allergic Rhinitis (BALANCE) study: 6-month results

**Objective:** To evaluate real-world effectiveness of BDP nasal aerosol from the patient's perspective by using a postmarketing observational registry.

**Methods:** Patients (N 824) from 43 U.S. study sites completed monthly patient-reported outcome instruments, including the Rhinitis Control Assessment Test (primary outcome variable), Treatment Satisfaction Questionnaire for Medication, Work Productivity and Activity Impairment Questionnaire plus Classroom Impairment Questions: Allergy-Specific, Pittsburgh Sleep Quality Index, and Mini Rhinoconjunctivitis Quality of Life Questionnaire for 6 months.



# Beclomethasone Dipropionate Nasal Aerosol in Patients with Perennial Allergic Rhinitis (BALANCE) study: 6-month results



## Safety of intranasal corticosteroids

Greg W. Bensch, MD

Allergy, Immunology and Asthma Medical Group, Bensch Clinical Research, Stockton, California



**Objective:** To discuss INCS safety data for the use of INCSs in patients with asthma and allergic rhinitis.

### Results:

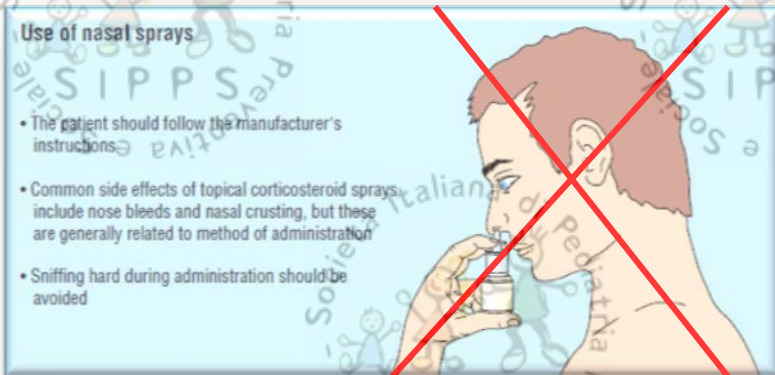
- ✓ These studies reveal no evidence of increased risk of nasal atrophy, and only isolated cases of septal perforation have been reported.
- ✓ Evidence of hypothalamic-pituitary-adrenal axis suppression is inconsistent and not clinically significant.
- ✓ Early growth studies indicated that beclomethasone dipropionate but not other INCSs have systemic effects on growth; however, newer, larger, and better designed studies are detecting small but significant growth effects in other INCSs.
- ✓ INCSs do not increase the risk of cataracts or glaucoma, although there are anecdotal data on transient elevated intraocular pressure.
- ✓ Data on concurrent use of INCSs and ICSs are limited, but these limited data reveal no evidence of systemic effects on the hypothalamic-pituitary-adrenal axis.

**Conclusion:** More studies of concurrent therapy are needed because concurrent use of ICSs and INCSs is common in practice. Clinicians might want to consider monitoring whether there are risk factors, such as a family history of glaucoma.



# Steroidi topici effetti collaterali

1. Effetti comuni: **epistassi**, secchezza delle mucose, prurito, irritazione e bruciore nasale, cefalea, faringite
2. Rari effetti più gravi
3. Benefici ampiamente superiori al rischio



XXX

CONGRESSO NAZIONALE  
SOCIETÀ ITALIANA DI PEDIATRIA  
PREVENTIVA E SOCIALE



BAMBINI DI IERI, OGGI E DOMANI...  
LA NOSTRA CARE, IL NOSTRO CUORE

TEATRO DI ORTIGIA • 7 - 10 GIUGNO 2018

SIRACUSA

Sistema Socio Sanitario



Regione  
Lombardia

ASST Fatebenefratelli Sacco

GRAZIE

casa  
pediatrica