

[전문가로부터 배우는 알레르기질환 약물 사용법]

## 비염엔 무조건 항히스타민제? - 증상에 따른 약물 선택. 스테로이드 스프레이 이외에 코가 뻥 뚫리는 비염 약물 치료방법 소개

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### 알레르기비염의 치료

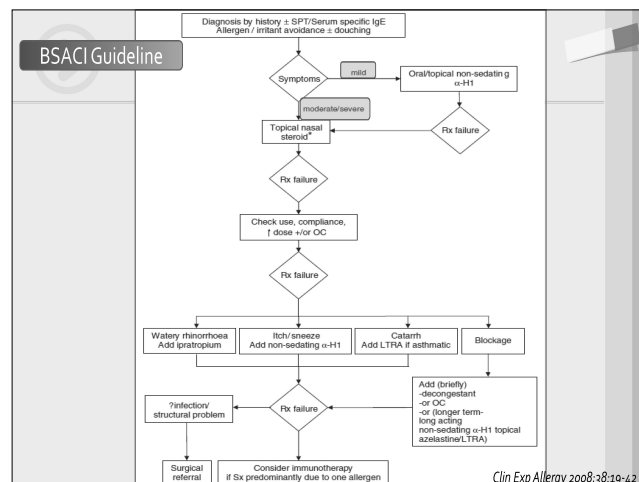
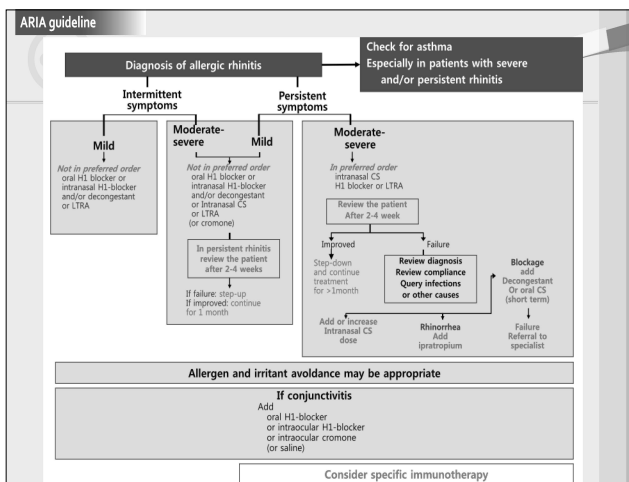
- 현재까지 알레르기비염을 완치할 치료법은 없음
- 증상 조절 !!! - 대부분 primary care에서 가능
- 주의사항 → *specialist*에게 의뢰
  - Unusual presentation
  - Red flag symptoms
    - Bloody purulent discharge
    - Pain and nasal blockage (often unilateral)
    - Nasal pain, stuffiness, nosebleeds, rhinitis, crusting, nasal deformity due to perforated septum (suspected Wegener's granulomatosis)

적절한 약물선택

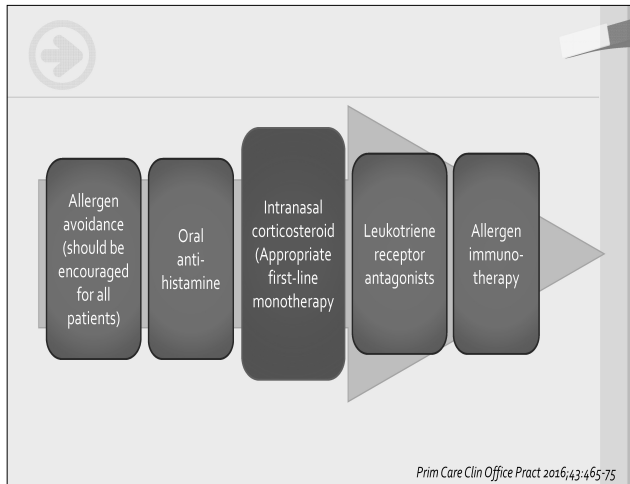
- 환자의 증상
- 환자의 중증도
- 환자의 선호도
- 환자의 연령

### 알레르기비염의 치료 약물

- Intranasal corticosteroid
- Antihistamine
- Mast cell stabilizer
- Leukotriene receptor antagonist
- Decongestant
- Anticholinergics
- Saline irrigation
- Immunotherapy



김효빈 비염엔 무조건 항히스타민제? - 증상에 따른 약물 선택. 스테로이드 스프레이 이외에 코가 뻥 뚫리는 비염 약물 치료방법 소개



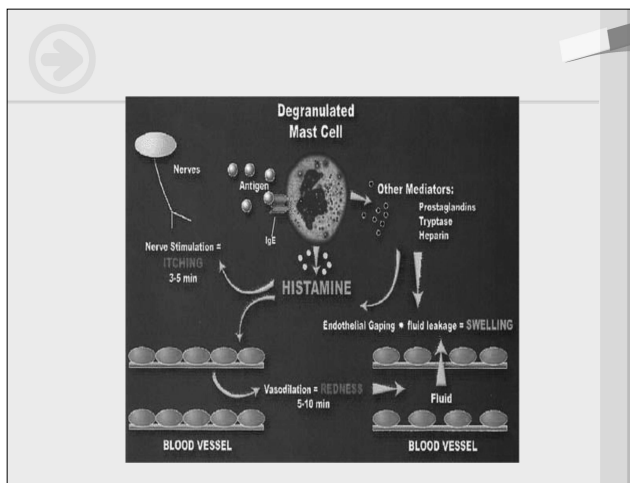
## 항히스타민제

### □ 1세대 항히스타민제

- chlorpheniramine, clemastine, hydroxyzine, ketotifen, mequitazine, oxatamide, astemizole, terfenadine
- Blood-brain barrier 통과하여 dopamine, serotonin, acetylcholine receptors에 작용함 → CNS 부작용 나타남

### □ 2세대 항히스타민제

- cetirizine(지르텍), levocetirizine(씨잘), ebastine(에바스텔), fexofenadine(알레그라), loratadine(클라리틴), mizolastine, desloratadine(에리우스), acrivastine azelastine,
- CNS 부작용 감소, 심혈관계 부작용(QT 연장) 감소

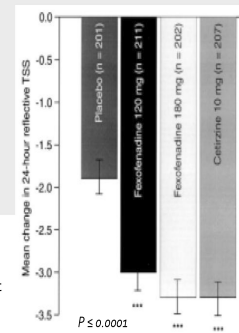


## hbkim1126

### □ 항히스타민제의 효과

- 효과적: 코가려움증, 재채기, 콧물, 눈가려움증, 눈물
- 제한적으로 효과적: 코막힘

Total symptom score (TSS)  
1. Sneezing  
2. Rhinorrhea  
3. Itchy nose, palate, or throat  
4. Itchy, watery, or red eyes  
5. Nasal congestion



J Allergy Clin Immunol 1999;104:927-33

TABLE II. 24-Hour reflective individual symptom scores (ITT)

Symptom		Change from baseline treatment (once-daily)			
		Placebo (n = 201)	Fexofenadine HCl 120 mg (n = 211)	180 mg (n = 202)	Cetirizine 10 mg (n = 207)
Sneezing	Baseline (mean ± SE)	1.8 ± 0.0	1.8 ± 0.0	1.8 ± 0.0	1.8 ± 0.0
	Change from baseline (mean ± SE)	-0.5 ± 0.0	-0.7 ± 0.0	-0.8 ± 0.1	-0.8 ± 0.0
Rhinorrhea	Baseline (mean ± SE)	1.9 ± 0.0	1.9 ± 0.0	2.0 ± 0.0	1.9 ± 0.0
	Change from baseline (mean ± SE)	-0.5 ± 0.10	-0.7 ± 0.0	-0.8 ± 0.0	-0.8 ± 0.0
Itchy nose, palate, or throat	Baseline (mean ± SE)	1.9 ± 0.0	1.8 ± 0.0	1.9 ± 0.0	1.9 ± 0.0
	Change from baseline (mean ± SE)	-0.5 ± 0.1	-0.8 ± 0.0	-0.9 ± 0.0	-0.8 ± 0.0
Itchy, watery, or red eyes	Baseline (mean ± SE)	1.7 ± 0.1	1.8 ± 0.1	1.8 ± 0.1	1.8 ± 0.1
	Change from baseline (mean ± SE)	-0.4 ± 0.0	-0.7 ± 0.0	-0.8 ± 0.0	-0.8 ± 0.0
Nasal congestion	Baseline (mean ± SE)	1.8 ± 0.1	1.7 ± 0.1	1.8 ± 0.1	1.8 ± 0.1
	Change from baseline (mean ± SE)	-0.3 ± 0.0	-0.4 ± 0.0	-0.4 ± 0.0	-0.4 ± 0.0

\*Pairwise comparison of treated group to placebo.

J Allergy Clin Immunol 1999;104:927-33

## A Review of the Efficacy of Desloratadine, Fexofenadine, and Levocetirizine in the Treatment of Nasal Congestion in Patients With Allergic Rhinitis

### □ 결론

- Desloratadine, fexofenadine, levocetirizine이 알레르기비염의 코막힘 완화에 효과적임
- 이 효과는 투약 2일 후부터 나타나기 시작하여 투약 기간 동안 지속됨

Clin Ther 2009;31:921-44

### 1세대, 2세대 항히스타민제간 진정효과 비교

	표준용량	표준용량 이상
1세대		
Diphenhydramine	↑↑↑↑	↑↑↑↑
Clemastine	↑↑↑↑	↑↑↑↑
Chlorpheniramine	↑↑	↑↑
2세대		
Cetirizine	↑	↑↑
Desloratadine	↔	↑
Fexofenadine	↔	↔

South Med J 2006;99:594

### 류코트리엔조절제

- Montelukast
- Pranlukast
- 효과
  - 위약보다는 낮고, INS나 항히스타민제 보다는 효과가 덜함
  - 2<sup>nd</sup>-line 또는 3<sup>rd</sup>-line으로 선택하여 사용

### Montelukast in allergic rhinitis: a systematic review and meta-analysis

- Montelukast vs. Placebo
- Montelukast vs. Antihistamine
- Montelukast vs. INS
- Montelukast plus Antihistamine vs. Placebo
- Montelukast plus Antihistamine vs. INS

Nasal symptom score Adult

Clin Otolaryngol 2006;31:360-7

### The efficacy and safety of H1-antihistamine versus Montelukast for allergic rhinitis: A systematic review and meta-analysis

- of Composite Symptoms Score (CSS)
  - Montelukast vs. Placebo
  - Montelukast vs. combined therapy
- of Daytime Nasal Symptoms Score (DNSS)
  - Montelukast vs. Placebo
  - Montelukast vs. combined therapy
- of Nighttime Symptoms Score (NSS)
  - Montelukast vs. Placebo
- of Daytime Eye Symptoms Score (DES)
  - Montelukast vs. Placebo
- of Rhinoconjunctivitis Quality of Life Questionnaire (RQLQ)
  - Montelukast vs. Placebo

Biomed Pharmacother 2016;83:989-97

### The Efficacy and Safety of Selective H<sub>1</sub>-Antihistamine versus Leukotriene Receptor Antagonist for Seasonal Allergic Rhinitis: A Meta-Analysis

- of Composite Symptoms Score (CSS)
  - LTRA vs. Antihistamine
- of Daytime Nasal Symptoms Score (DNSS)
  - LTRA vs. Antihistamine
- of Nighttime Symptoms Score (NSS)
  - LTRA vs. Antihistamine

❖ 류코트리엔조절제와 항히스타민제는 서로 효과와 안전성은 유사하나, 항히스타민제는 주간 비증상(congestion, rhinorrhea, pruritus, sneezing)에, 류코트리엔조절제는 야간 증상(difficulty going to sleep, nighttime awakenings, nasal congestion on awakening)에 더 적절함.

PLoS One 2014;9:e112815

### 부작용

Table 4  
Safety of Montelukast vs. SAHs.

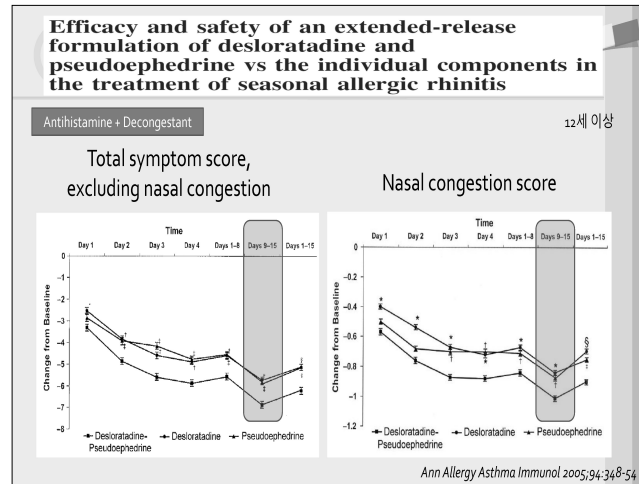
	Asthenia/Fatigue Rate (95%CI)	Headache Rate (95%CI)	Somnolence Rate (95%CI)
SAHs	2.25(1.38,3.12)	3.57(3.42,3.72)	2.66(1.80,3.52)
Montelukast	0.75(0.3,1.2)	2.67(1.37,3.98)	-

Biomed Pharmacother 2016;83:989-97

### 비충혈완화제 (Decongestant)

- 알레르기비염의 증상
  - 코가려움증, 재채기, 콧물, 코막힘
  - 눈가려움증, 눈물, 눈충혈
  - 귀나 입천장 가려움증
- Pseudoephedrine, phenylpropanolamine
- 효과
  - Increase nasal patency by shrinking swollen turbinates

수면장애  
안면변형



- Desloratadine + pseudoephedrine
- Loratadine + pseudoephedrine
- Fexofenadine + pseudoephedrine

- Monotherapy에 비해 알레르기비염 증상 호전
- 복합제인 경우, 동시에 복용하게 되면 순응도 증가, 약가 감소
- Daily activity, work productivity 개선
- 천식이 동반된 경우, 기침, 천명 등의 천식 증상과 폐기능 호전

Ann Allergy Asthma Immunol 2005;94:348-54  
J Allergy Clin Immunol 1997;100:781-8  
J Allergy Clin Immunol 1999;104:100-6

### 부작용

Adverse event	No. (%) of patients		
	Desloratadine-pseudoephedrine, 5/240 mg once daily	Desloratadine, 5 mg once daily	Pseudoephedrine, 240 mg once daily
Any event	133 (35)	107 (29)	146 (39)
Dry mouth	31 (8)	11 (3)	51 (14)
Fatigue	7 (2)	12 (3)	9 (2)
Headache	19 (5)	22 (6)	24 (6)
Psychomotor hyperactivity	7 (2)	1 (<1)	10 (3)
Nausea	6 (2)	3 (1)	10 (3)
Tachycardia	3 (1)	1 (<1)	10 (3)
Insomnia	17 (5)	3 (1)	27 (7)
Somnolence	14 (4)	5 (1)	10 (3)

### 항콜린제

- Ipratropium bromide
- 효과
  - 콧물 (watery nasal discharge) 감소에만 효과적
  - 재채기, 코가려움증, 코막힘에는 효과 없음
  - 따라서, 다른 비염 치료제들과 함께 사용함
- 부작용
  - 비강분무제로 사용하면, 전신 부작용이 거의 없음

### 약물별 알레르기비염의 증상에 대한 효과

	Sneezing	Itching	Rhinorrhea	Congestion	Eye
Nasal corticosteroids	+++	+++	+++	+++	++
Antihistamine, oral	++	+++	++	±	++
Antihistamine, nasal	++	++	++	+	-
Decongestant, oral	-	-	-	+	-
Decongestant, nasal	-	-	-	++++	-
Leukotriene modifier	+	+	+	+	+
Mast cell stabilizer, nasal	+	+	+	+	-
Anticholinergic agent, nasal	-	-	++	-	-

- : no effect, ± : questionable effect, + : mild effect, ++ : good effect, +++ : very good effect, ++++ : excellent effect