

[전문가로부터 배우는 알레르기질환 약물 사용법]

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

김효빈

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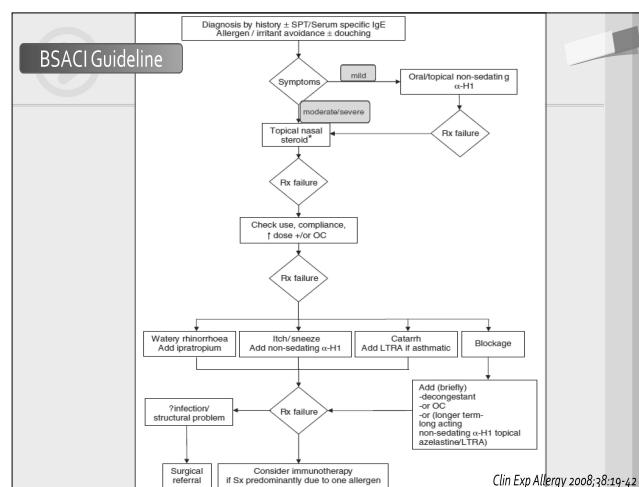
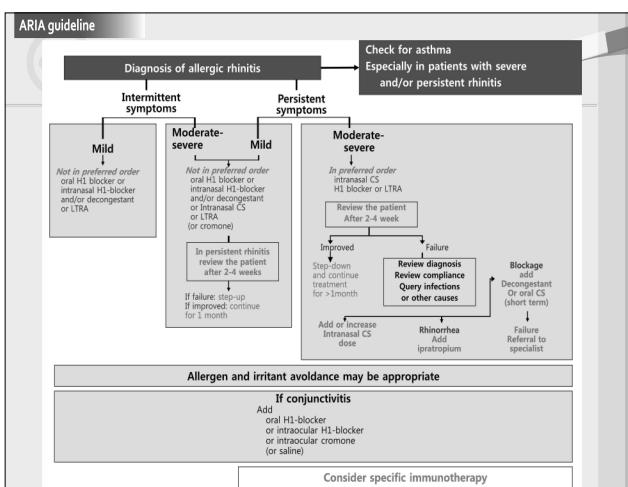
알레르기비염의 치료

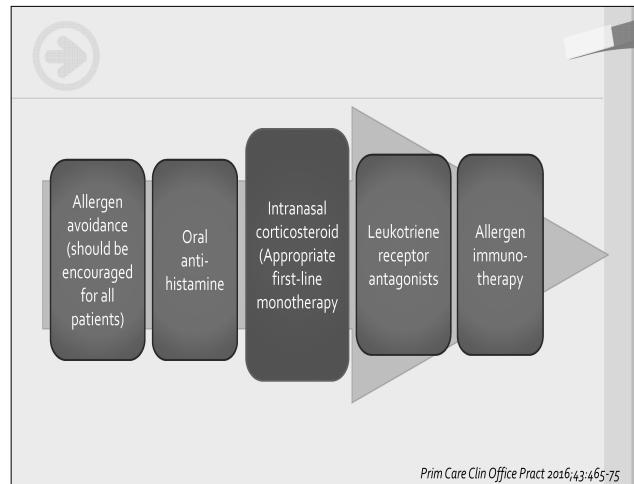
- 현재까지 알레르기비염을 완치할 치료법은 없음
- 증상 조절!!! - 대부분 primary care에서 가능
- 주의사항 → specialist에게 의뢰
 - ▣ Unusual presentation
 - ▣ Red flag symptoms
 - ▣ Bloody purulent discharge
 - ▣ Pain and nasal blockage (often unilateral)
 - ▣ Nasal pain, stuffiness, nosebleeds, rhinitis, crusting, nasal deformity due to perforated 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 —





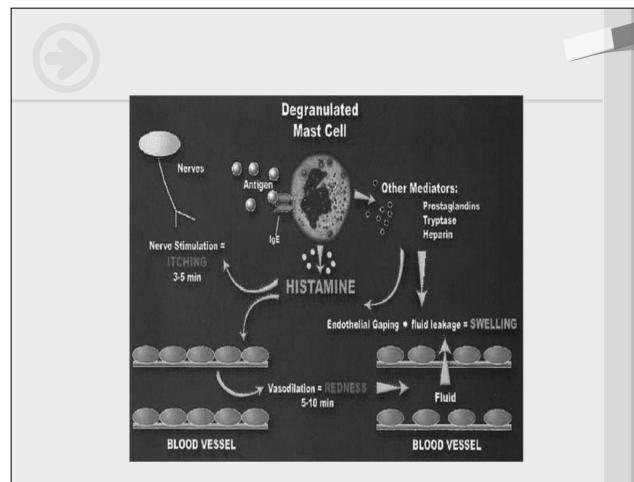
항히스타민제

▣ 1세대 항히스타민제

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

▣ 2세대 항히스타민제

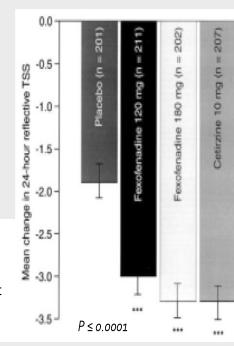
- cetirizine(지르텍), levocetirizine(씨잘), ebastine(에바스텔), fexofenadine(알레그라), loratadine(클라리틴), mizolastine, desloratadine(에리우스), ariavastine azelastine,
- CNS 부작용 감소, 심혈관계 부작용(QT 연장) 감소



hbkim1126

▣ 항히스타민제의 효과

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



J Allergy Clin Immunol 1999;104:927-33

Symptom	Change from baseline treatment (once-daily)				
	Fexofenadine HCl				
	Placebo (n = 201)	120 mg (n = 211)	180 mg (n = 202)	Cetirizine 10 mg (n = 207)	
Sneezing	Baseline (mean ± SE) Change from baseline (mean ± SE)	1.8 ± 0.0 -0.5 ± 0.0	1.8 ± 0.0 -0.7 ± 0.0	1.8 ± 0.0 -0.8 ± 0.1	1.8 ± 0.0 -0.8 ± 0.0
Rhinorrhea	Baseline (mean ± SE) Change from baseline (mean ± SE)	1.9 ± 0.0 -0.5 ± 0.10	1.9 ± 0.0 -0.7 ± 0.0	2.0 ± 0.0 -0.8 ± 0.0	1.9 ± 0.0 -0.8 ± 0.0
Itchy nose, palate, or throat	Baseline (mean ± SE) Change from baseline (mean ± SE)	1.9 ± 0.0 -0.5 ± 0.1	1.8 ± 0.0 -0.8 ± 0.0	1.9 ± 0.0 -0.9 ± 0.0	1.9 ± 0.0 -0.8 ± 0.0
Itchy, watery, or red eyes	Baseline (mean ± SE) Change from baseline (mean ± SE)	1.7 ± 0.1 -0.4 ± 0.0	1.8 ± 0.1 -0.7 ± 0.0	1.8 ± 0.1 -0.8 ± 0.0	1.8 ± 0.1 -0.8 ± 0.0
Nasal congestion	Baseline (mean ± SE) Change from baseline (mean ± SE)	1.8 ± 0.1 -0.3 ± 0.0	1.8 ± 0.1 -0.4 ± 0.0	1.8 ± 0.1 -0.4 ± 0.0	1.8 ± 0.1 -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 코막 힘 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 낫고, INS나 항히스타민제 보다는 효과가 덜함
- 2nd-line 또는 3rd-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

Clin Otolaryngol 2006;31:360-7

Study	WMD (random) (%)	95% CI	WMD (random) (%)	95% CI
Di Lorenzo, 2004	+	-1.67 [-14.03, -9.31]	-1.67 [-14.03, -9.31]	
Lee, 2004	+	-6.87 [-18.21, 4.47]	-6.87 [-18.21, 4.47]	
Meltzer, 2000	+	-12.00 [-16.85, -7.05]	-12.00 [-16.85, -7.05]	
Nayak, 2002	+	-10.84 [-14.22, -7.08]	-10.84 [-14.22, -7.08]	
Pullels, 2002	+	-1.25 [-17.37, -5.19]	-1.25 [-17.37, -5.19]	
Wilson, 2000	+	-21.68 [-37.06, -6.28]	-21.68 [-37.06, -6.28]	
Wilson, 2001b	+	-16.59 [-23.75, -4.43]	-16.59 [-23.75, -4.43]	
Wilson, 2001c	+	-5.84 [-12.78, 1.10]	-5.84 [-12.78, 1.10]	
Wilson, 2002	+	-14.16 [-18.14, -10.18]	-14.16 [-18.14, -10.18]	
Total (95% CI)	↓	-11.81 [-13.46, -10.17]	-11.81 [-13.46, -10.17]	

Test for heterogeneity: $\chi^2 = 8.69$, $d.f. = 8$ ($P = 0.37$), $I^2 = 7.9\%$
Test for overall effect: $Z = 14.05$ ($P < 0.00001$)

Montelukast + Antihistamine Placebo

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

Biomed Pharmacother 2016;83:989-97

The Efficacy and Safety of Selective H₁-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

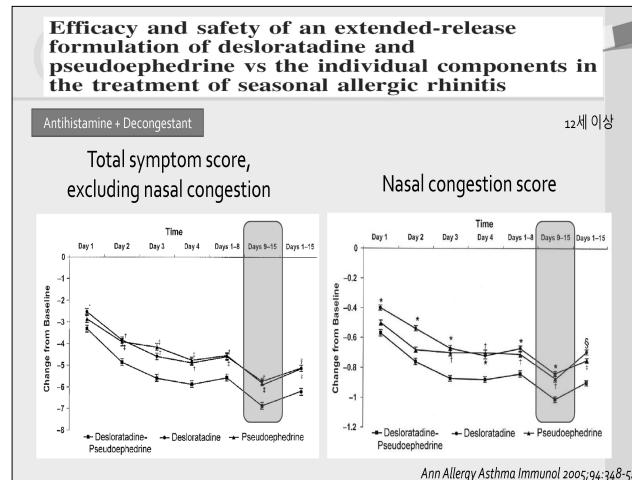
Table 4
Safety of Montelukast vs. SAHs.

	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



- 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 (39)	107 (29)	146 (39)
Dry mouth	51 (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