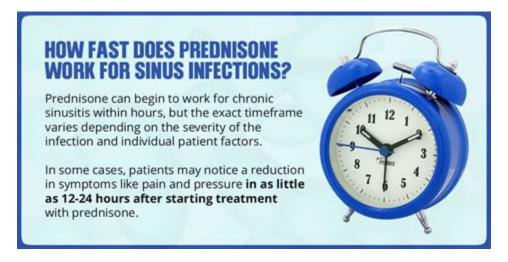


Medication Dos and Don'ts Avoid alcohol before or after taking this medication. Take the prescribed dose by mouth right after a full meal to reduce stomach upset. Do not increase the dosage or take multiple doses unless directed by your health care provider.



Υ ? Υ ? Υ ? Ξ ? BUY STEROIDS ONLINE Υ ? Υ ? Υ ?

How to Use Prednisone for Sinus Infection (A Complete Guide)



PMID: 24293353 Intranasal steroids for acute sinusitis Monitoring Editor: Anca Zalmanovici Trestioreanu, John Yaphe, and Cochrane Acute Respiratory Infections Group Clalit Health Services, Tel Aviv District, Amsterdam 9, Tel AvivIsrael, 6936181 University of Minho, School of Health Science,

BragaPortugal

Benefits and harm of systemic steroids for short- and long-term use in .

Hax et al. Clin Transl Allergy (2020) 10:1 https://doi.org/10.1186/s13601-019-0303-6

Clinical and Translational Allergy

REVIEW

Open Access

Benefits and harm of systemic steroids for short- and long-term use in rhinitis and rhinosinusitis: an EAACI position paper

Valerie Hox¹¹¹, Evelijn Lourijsen², Arnout Jordens³, Kristian Aasbjerg⁴, Ioana Agache⁵, Isam Alobid^{6,7} Claus Bachert^{1,8}, Koen Boussery⁹, Paloma Campo¹⁰, Wytske Fokkens², Peter Hellings¹¹, Claire Hopkins¹², Ludger Klimek¹³, Mika Mäkelä¹⁴, Ralph Mösges¹⁵, Joaquim Mullol⁶, Laura Pujols⁶, Carmen Rondon¹⁰ Michael Rudenko¹⁶, Sanna Toppila-Salmi¹⁴, Glenis Scadding¹⁷, Sophie Scheire⁹, Peter-Valentin Tomazic¹⁸, Thibaut Van Zefe¹, Martin Wagemann¹⁰, Job F, M. van Boven²⁰ and Philippe Gevaert³

Abstract

Because of the inflammatory mechanisms of most chronic upper airway diseases such as rhinitis and chronic rhinosi nusitis, systemic steroids have been used for their treatment for decades. However, it has been very well documented that—potentially severe—side-effects can occur with the accumulation of systemic steroid courses over the years. A consensus document summarizing the benefits of systemic steroids for each upper airway disease type, as well as highlighting the potential harms of this treatment is currently lacking. Therefore, a panel of international experts in the field of Rhinology reviewed the available literature with the aim of providing recommendations for the use of systemic steroids in treating upper airway disease.

Keywords: Glucocorticosteroids, Rhinitis, Rhinosinusitis

Introduction

Chronic upper airway inflammation is one of the most prevalent chronic disease entities in the world with rhinitis being the most common presentation form affecting 30% of the Western population [1]. Rhinitis is defined as an inflammation of the lining of

the nose and is characterized by nasal symptoms including rhinorrhoea, sneezing, nasal blockage and/or itch-ing of the nose. Allergic rhinitis (AR) is the best-known form of non-infectious rhinitis and is associated with an IgE-mediated immune response against allergens [1]. However, a substantial group of rhinitis patients has no known allergy and they form a very heterogeneous nonallergic rhinitis (NAR) patient population suffering from

dence: Valerie? "Conteppondence: Weine Novestouvain.txe ¹ Cliniques Universitaires Saint-Luc Brussels, Avi Hippocrate 10, 1200 Insciels, Belgium Full fist of author information is available at the end of the article:



drug-induced rhinitis, occupational rhinitis, irritantinduced rhinitis, hormonally linked rhinitis and idiopathic rhinitis [2, 3]. When inflammation of the nasal mucosa extends to the mucosa of the paranasal sinuses, the consensus term of rhinosinusitis is used. Rhinosinusitis has been shown to affect about 10% of the Western population [4]. In addition to rhinitis symptoms, rhinos asitis is characterized by postnasal drip, facial pressure and reduction or loss of smell [5]. Acute rhinosinusitis (ARS) is a very common condition and mostly of viral origin [5] About 0.5-2% of the viral ARS are complicated by a bacterial infection [5].

Chronic rhinosinusitis (CRS) is defined as the pres ence of two or more nasal symptoms, one of which should be either nasal blockage or nasal discharge, and/ or smell problems, and/or facial pain for more than 12 weeks, in combination with inflammatory signs confirmed by nasal endoscopy and/or CT scan. CRS can

Authors' conclusions: Current evidence suggests that oral corticosteroids as an adjunctive therapy to oral antibiotics are effective for short-term relief of symptoms in acute sinusitis. However, data are limited and there is a significant risk of bias.

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Systemic Corticosteroid Therapy for Acute Sinusitis



INTRODUCTION Acute rhinosinusitis (ARS) is defined as symptomatic inflammation of the nasal cavity and paranasal sinuses (figure 1) lasting less than four weeks. The term "rhinosinusitis" is preferred to "sinusitis" since inflammation of the sinuses rarely occurs without concurrent inflammation of the nasal mucosa [1].

Short-Term Systemic Corticosteroids: Appropriate Use in Primary Care - AAFP

Short-Term Systemic Corticosteroids: Appropriate Use in Primary Care

Evan L. Dvorin, MD, Ochsner Health System, New Orleans, Louisiana Mark H. Ebell, MD, MS, University of Georgia, Athens, Georgia

Short-term systemic corticosteroids, also known as steroids, are frequently prescribed for adults in the outpatient setting by primary care physicians. There is a lack of supporting evidence for most diagnoses for which steroids are prescribed, and there is evidence against steroid use for patients with acute bronchitis, acute sinusitis, carpal tunnel, and allergic rhinitis. There is insufficient evidence supporting routine use of steroids for patients with acute pharyngitis, lumbar radiculopathy, carpal tunnel, and herpes zoster. There is evidence supporting use of short-term steroids for Bell palsy and acute gout. Physicians might assume that short-term steroids are harmless and free from the widely known long-term effects of steroids; however, even short courses of systemic corticosteroids are associated with many possible adverse effects, including hyperglycemia, elevated blood pressure, mood and sleep disturbance, sepsis, fracture, and venous thromboembolism. This review considers the evidence for short-term steroid use for common conditions seen by primary care physicians. (Am Fam Physician. 2020;101(2):89-94. Copyright © 2020 American Academy of Family Physicians.)

Published online December 16, 2019

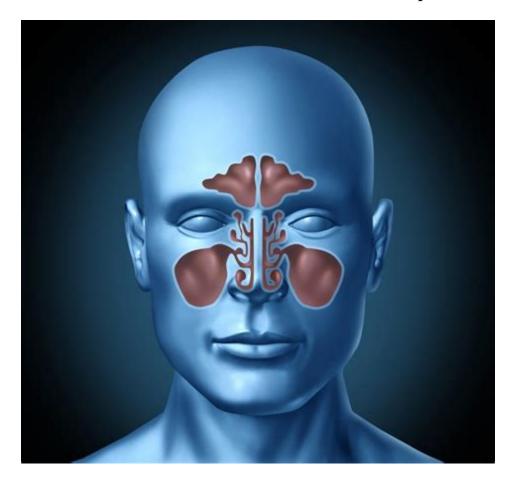
21% of adults received at least one outpatient at two urgent care clinics.³ Prescribing oral corprescription for a short-term (less than 30 days) systemic corticosteroid over a three-year period, even after excluding patients who had asthma, chronic obstructive pulmonary disease, cancer, or inflammatory conditions for which chronic steroids may be indicated. The most common diagnoses associated with outpatient prescribing of short-term corticosteroids included (from most frequent to least frequent) upper respiratory infection, spine conditions, allergic rhinitis, acute bronchitis, connective tissue and joint disorders, asthma, and skin disorders.1 Most of these short courses of corticosteroids were prescribed by family medicine and internal medicine physicians.1 Several recent studies have confirmed high rates of prescribing systemic corticosteroids for patients with acute respiratory tract infections,

This clinical content conforms to AAFP criteria for continuing medical education (CME). See CME Quiz on page 79. Author disclosure: No relevant financial attiliations

ranging from 11% of all outpatient respiratory infections in a national study 2 to 70% of patients An analysis of national claims data found that with at least one week of cough in a small study ticosteroids in short courses may seem to be free from significant adverse effects; however, a large national data set of private insurance claims, which included approximately 1.5 million people, showed that a short course of oral steroids was associated with an increased risk of sepsis (relative risk [RR] = 5.3), venous thromboembolism (RR = 3.3), and fracture (RR = 1.9) in the five to 30 days after steroid initiation compared with those who had not received a short course of steroids.1 The estimated number needed to harm after a short course of steroids was 140 for fracture, 454 for venous thromboembolism, and 1.250 for sepsis. There are also case reports of avascular necrosis developing after even one course of systemic steroids.⁴³ It is well understood that short-term systemic steroids can cause hyperglycemia, elevated blood pressure, immunocompromised state, mood and sleep disturbance, and fat necrosis when injected. This review summarizes the evidence base for the effectiveness of short-term systemic (either oral or injected intramuscularly) steroid use in adults in the outpatient primary care setting (Figure 1).

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Analgesics, intranasal steroids and/or nasal saline irrigation may be recommended for symptomatic relief of viral or bacterial rhinosinusitis. Adults with uncomplicated ABRS should be either .



Uncomplicated acute sinusitis and rhinosinusitis in adults . - UpToDate

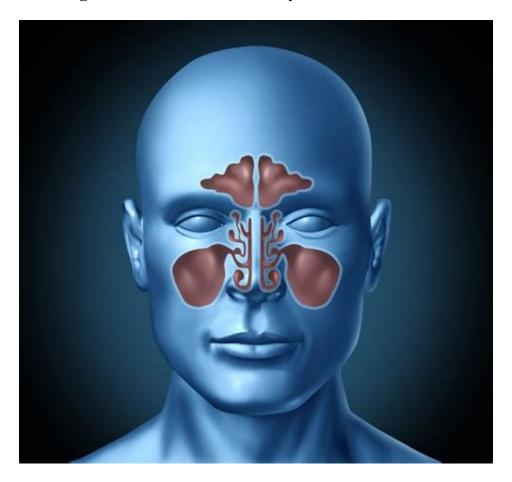
There are no recommendations regarding adjuvant therapy for acute bacterial sinusitis, although intranasal corticosteroids, saline nasal irrigation or lavage, topical or oral decongestants .

Mayo Clinic Q&A: Sinusitis and treatment options - MSN



Unless a bacterial infection develops, most cases resolve within a week to 10 days. Home remedies may be all you need to treat acute sinusitis. Sinusitis that lasts more than 12 weeks despite medical treatment is called chronic sinusitis. Over-the-counter medications may relieve facial pain and sinus congestion associated with acute sinusitis .

Acute sinusitis - Diagnosis and treatment - Mayo Clinic



Use a warm compress. A warm compress on the nose and forehead might help lessen pressure in the sinuses. Keep sinuses moist. Breathing in the steam from a bowl of hot water with a towel over the head might help. Or take a hot shower, breathing in the warm, moist air. This will help ease pain and help mucus drain.

PDF Intranasal Corticosteroids in Management of Acute Sinusitis: A.

	INCS Events	Total	Placebo Events	Total	Weight	Risk Difference (Random Effects) 95% Cl	Risk Difference (Random) 95% Cl	
Dolor et al ²⁰	36	47	28	48	9.7%	0.18 (0.00 to 0.37)		
Meltzer et al ^{er}	442	478	225	252	69.2%	0.03 (-0.01 to 0.08)	-	
Williamson et al ¹⁸	78	102	77	105	21,1%	0.03 (-0.09 to 0.15)		-
		627		405	100.0%	0.05 (-0.01 to 0.11)		
Heterogeneity:								
Test for overall	effect: Z =	1.51 (P =	.13)		-			+
A						-0.2 -0 Favors placebo		0.2 Favors steroid
	INCS Events	Total	Placebo Events	Total	Weight	Risk Difference (Random Effects) 95% Cl	Risk Difference (Random) 95% Cl	
Dolor et al ²⁰	41	47	33	48	10.7%	0.18 (0.02 to 0.35)		-
Meltzer et al ^{an}	124	200	102	207	30.7%	0.13 (0.03 to 0.22)	· · · · · · · · · · · · · · · · · · ·	-
Nayak et al**	370	574	160	290	58.6%	0.09 (0.02 to 0.16)	_	—
		821		545	100.0%	0.11 (0.06 to 0.17)		
Heterogeneity:	P = 0%							
Test for overall		4.18 (P <.	0001)		-			-
						-0.2 -0	1 0 0.1	0.2

Our findings are consistent with existing clinical practice guidelines. 4,6 Although the European guideline states that oral corticosteroids as an adjunctive therapy to antibiotics may be effective for short-term symptom relief in patients experiencing severe symptoms of acute sinusitis, this regimen is not recommended as standard practice .

Adult Sinusitis - Clinical Practice Guideline | AAFP

Guideline	Signs and symptoms	Diagnostic criteria
Clinical Practice Guideline (update): Adult Sinusitis'	Purulent nasal discharge with nasal obstruction, facial pain, or facial pressure	Presumed acute viral rhinosinusitis: Symptoms last less than seven days and do not worsen Presumed acute bacterial rhinosinusitis: Severe symptoms in first three to four days of illness; symptome persist seven days or longer after initial presentation; symptoms worsen within seven days of initial presentation
European Position Paper on Rhinosinusitis and Nasal Polyps 2012 ³	Inflammation of the nasal cavity and paranasal sinus, characterized by either nasal congestion or obstruction or nasal discharge with or without facial pain or pressure with or without decreased sense of smell	Presumed acute viral rhinosinusitis: Symptoms last less than 10 days and do not worsen Presumed acute bacterial rhinosinusitis: Symptoms persist more than 10 days after start of URI; symptoms worsen after five days
IDSA Clinical Practice Guideline 2011 ⁹	Two major symptoms or one major and more than two minor symptoms Major symptoms: Purulent nasal discharge, nasal congestion or obstruction, facial congestion or fullness, facial pain or pressure, decreased sense of smell, fever Minor symptoms: Headache; ear pain, pressure, fullness, halitosis; dental pain; cough; fever; fatigue	Presumed acute viral rhinosinusitis: For mild symptoms, watchful waiting for first three days of illness Presumed acute bacterial rhinosinusitis: Severe symptoms in first three to four days of illness; symptoms persist more than 10 days after start of URI; symptoms worsen after three to four days
Joint Task Force on Practice Parameters 2005 ¹⁴	Nasal congestion, purulent rhinorrhea, facial-dental pain, postnasal drainage, headache, cough, tenderness over sinuses, dark circles under eyes	Presumed acute viral rhinosinusitis: Symptoms last less than 10 days and do not worsen Presumed acute bacterial rhinosinusitis: Symptoms persist more than 10 to 14 days Severe symptoms: fever with purulent nasal discharge, facial pain or tenderness, periorbital swelling
Rhinosinusitis Initiative 2004 ¹⁷	Two or more major symptoms or one major and two or more minor symptoms (see IDSA symptom lists above)	Presumed acute bacterial rhinosinusitis: Severe symptoms in first three to four days of illness, symptoms persist more than 10 days after start of URI; symptoms worsen within 10 days of initial improvement

Short-term systemic corticosteroids are often prescribed for patients with acute bronchitis. 1 - 3 This may be appropriate for bronchitis associated with asthma or chronic obstructive pulmonary.

Mayo Clinic Q and A: Sinusitis and treatment options



The evidence says NO to oral steroids (such as prednisone or methylprednisolone) for acute uncomplicated sinusitis. Oral steroids may help moderately with symptom relief for a few days but the 30 day outcome is the same. Serious adverse events are uncommon however so it is still common practice many places.



Oral Steroids for Sinusitis - University of Mississippi Medical Center

Most people with acute sinusitis get better without antibiotics. If symptoms persist for more than 10 days, or you develop fever or worsening sinus pressure, drainage or facial pain .

Steroids for acute sinusitis in adults and children | Cochrane



There have been suggestions, based on studies of allergic rhinitis and chronic sinusitis, that intranasal corticosteroids (INCS) may relieve symptoms and hasten recovery in acute sinusitis due to their anti-inflammatory properties. A critical systematic review of the literature found four well-conducted, randomised, placebo-controlled .

Acute Rhinosinusitis in Adults | AAFP

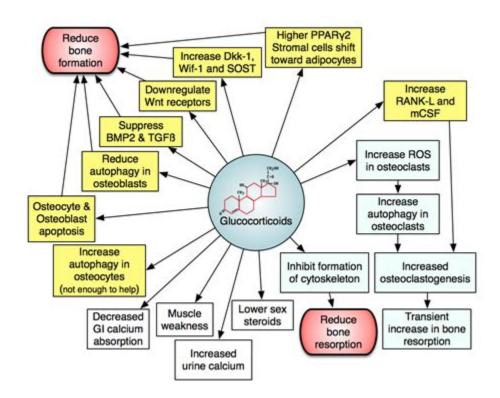
Sign/symptom	PPV* (%)	NPV* (%)	Sensitivity (%)	Specificity (%)
Symptoms after upper respiratory tract infection	81	88	89	79
Facial pain, pressure, or fullness (pain on bending forward)	77	75	75	77
Purulent rhinorrhea	61	55	35	78
Maxillary toothache	56	59	66	49
Nasal obstruction	43	35	60	22

*—PPV and NPV are based on an acute sinusitis prevalence of 50 percent in adults presenting to a general medical clinic with sinusitis symptoms.

Information from reference 5.

efi ts for patients with acute sinusitis. In particular, there have been no good-quality double-blind randomized controlled trials (RCTs) examining oral corticosteroids in acute sinusitis, even though the oral route is favored for other upper respiratory tract infections. In terms of intranasal steroids, Gail Hayward, MBBChir, DPhil

Systemic corticosteroids for acute sinusitis - PubMed



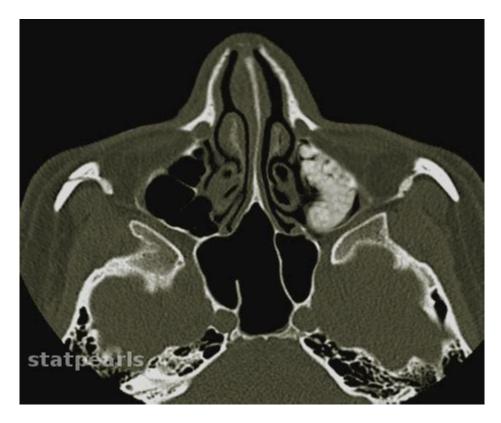
Because of the inflammatory mechanisms of most chronic upper airway diseases such as rhinitis and chronic rhinosinusitis, systemic steroids have been used for their treatment for decades. However, it has been very well documented that—potentially severe—side-effects can occur with the accumulation of systemic steroid courses over the years. A consensus document summarizing the benefits of .

Hold the Steroids for Acute Sinusitis - Advanced ENT & Allergy



28234148 10. 2500/ajra. 2017. 31. 4396 In the field of otolaryngology, oral corticosteroids (OCS) are widely prescribed for rhinosinusitis. Although there is evidence in the literature regarding specific OCS dosing protocols, it is not known to what extent these recommendations are being followed.

Acute Sinusitis - StatPearls - NCBI Bookshelf



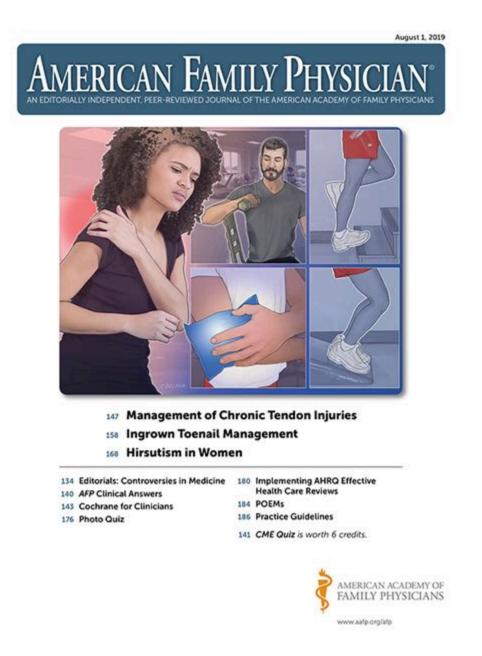
Intranasal corticosteroids offer a small therapeutic benefit in acute sinusitis, which may be greater with high doses and with courses of 21 days' duration. Further trials are needed in antibiotic-naïve patients. Keywords: corticosteroids, sinusitis, meta-analysis, intranasal administration, inhaled, facial pain, congestion Go to: INTRODUCTION

Benefits and harm of systemic steroids for short- and long-term use in .

Hox et al. Clin Trans/Allergy (2020) 10:1 https://doi.org/10.1186/s13601-019-0303-6 Clinical and Translational Allergy REVIEW **Open Access** 0 Benefits and harm of systemic steroids for short- and long-term use in rhinitis and rhinosinusitis: an EAACI position paper Valerie Hox^{1*}, Evelijn Lourijsen², Arnout Jordens¹, Kristlan Aasbjerg⁴, Ioana Agache⁵, Isam Alobid^{5,7} Claus Bachert^{1,8}, Koen Boussery⁹, Paloma Campo¹⁰, Wytske Fokkens², Peter Hellings¹³, Claire Hopkins¹², Ludger Klimek¹³, Mika Mäkela¹⁴, Ralph Mösges¹⁵, Joaquim Mullol⁶, Laura Pujols⁶, Carmen Rondon¹⁰, Michael Rudenko¹⁶, Sanna Toppila-Salmi¹⁴, Glenis Scadding¹⁷, Sophie Scheire⁹, Peter-Valentin Tomazic¹⁸, Thibaut Van Zele³, Martin Wagemann¹⁰, Job F. M. van Boven²⁰ and Philippe Gevaert¹ Abstract Because of the inflammatory mechanisms of most chronic upper airway diseases such as rhinitis and chronic rhinosi nusitis, systemic steroids have been used for their treatment for decades. However, it has been very well documented that-potentially severe-side-effects can occur with the accumulation of systemic steroid courses over the years. A consensus document summarizing the benefits of systemic steroids for each upper airway disease type, as well as highlighting the potential harms of this treatment is currently lacking. Therefore, a panel of international experts in the field of Rhinology reviewed the available literature with the aim of providing recommendations for the use of systemic steroids in treating upper airway disease Keywords: Glucocorticosteroids, Rhinitis, Rhinosinusitis Introduction drug-induced rhinitis, occupational rhinitis, irritant Chronic upper airway inflammation is one of the most induced rhinitis, hormonally linked rhinitis and idiopathic prevalent chronic disease entities in the world with rhirhinitis [2, 3]. When inflammation of the nasal mucosa nitis being the most common presentation form affecting extends to the mucosa of the paranasal sinuses, the con-30% of the Western population [1]. sensus term of rhinosinusitis is used. Rhinosinusitis has been shown to affect about 10% of the Western popula-Rhinitis is defined as an inflammation of the lining of tion [4]. In addition to rhinitis symptoms, rhinosinusitis the nose and is characterized by nasal symptoms includis characterized by postnasal drip, facial pressure and ing rhinorrhoea, sneezing, nasal blockage and/or itchreduction or loss of smell [5]. Acute rhinosinusitis (ARS) is a very common condition and mostly of viral origin [5]. ing of the nose. Allergic rhinitis (AR) is the best-known form of non-infectious rhinitis and is associated with an About 0.5-2% of the viral ARS are complicated by a bac-IgE-mediated immune response against allergens [1]. However, a substantial group of rhinitis patients has no terial infection [5]. Chronic rhinosinusitis (CRS) is defined as the presknown allergy and they form a very heterogeneous nonallergic rhinitis (NAR) patient population suffering from ence of two or more nasal symptoms, one of which should be either nasal blockage or nasal discharge, and/ or smell problems, and/or facial pain for more than *Contexpondence: Weirehowbsclouvainbe *Contexpans Universitaires Saire Luc Brussels, Av. Hippocrate 10, 1200 Brussels, Belgium Full for d'author information is available at the end of the anticle 12 weeks, in combination with inflammatory signs confirmed by nasal endoscopy and/or CT scan. CRS can 6 The Authorsh 2000. This article is licensed under a Dealine Common's Ath/Builton 4.0 International License, which permits use, having adaptation, distribution and episoduction in any medium or format, at long anyou day appropriate code to the original authoratio and the source, provide a lenk to the Context Common Kerner, and Indian Effortungs were made. The images or other third gain y matters in the autobase in the anticked on the anticked Common Common Kerner, unless indicated dottwine in a code time to the material. Finatural is not nucleid on the anticked Common Kerner and your intended on exist common filter to struct any advance on the provided on the anticked Common Kerner and your intended on exist on the context on exceeds the permitted use, you will need to datain permitsion directly from the copyright holdes. To view a togo of the lacense, while the provided common license of the source permitted use you will need to data in permittion directly from the copyright holdes. To view a togo of the lacense, while the provided common license of the lacense while the common license permitted in a code the source permitted and the source permitted and the lacense of the source permitted and the lacense of the provided and material and license systems. The common Review and your intended on users the physical subsciencements and placense of the source license of the data made license of the license of the data made available in this article, unless of the view license of the data. BMC

We identified 9,763,710 patients with an eligible ARTI encounter (mean age 39. 6, female 56. 0%) and found 11. 8% were prescribed systemic steroids (46. 1% parenteral, 47. 3% oral, 6. 6% both). All ARTI diagnoses but influenza predicted receiving systemic steroids.

AAP Releases Guideline on Diagnosis and Management of Acute . - AAFP



Oral corticosteroids like prednisone suppress the body's immune response and reduce inflammation in affected areas, such as the sinuses. This medication may relieve those with chronic or acute sinusitis, primarily when combined with other treatments like antibiotics.

Intranasal Corticosteroids in Management of Acute Sinusitis: A.

	INCS Events	Total	Placebo Events	Total	Weight	Risk Difference (Random Effects) 95% Cl	Risk Difference (Random) 95% Cl
Dolor et al ²⁹	36	47	28	48	9.7%	0.18 (0.00 to 0.37)	
Meltzer et al ^{er}	442	478	225	252	69.2%	0.03 (-0.01 to 0.06)	-
Williamson et al ¹⁸	78	102	77	105	21.1%	0.03 (-0.09 to 0.15)	
		627		405	100.0%	0.05 (-0.01 to 0.11)	-
Heterogeneity:							
Test for overall	effect: Z = 1	1.51 (P =	.13)		-	+	
A						-0.2 -0 Favors placebo	0.1 0 0.1 0.2 Favors stere
	INCS Events	Total	Placebo Events	Total	Weight	Risk Difference (Random Effects) 95% Cl	Risk Difference (Random) 95% Cl
Dolor et al ²⁸		Total 47		Total 48	Weight	(Random Effects)	(Random)
Dolor et al ²⁹ Meltzer et al ²⁹	Events		Events			(Random Effects) 95% Cl	(Random)
	Events 41	47	Events 33	48	10.7%	(Random Effects) 95% Cl 0.18 (0.02 to 0.35)	(Random)
Meltzer et al ^{ar}	Events 41 124	47 200	Events 33 102	48 207	10.7% 30.7%	(Random Effects) 95% CI 0.18 (0.02 to 0.35) 0.13 (0.03 to 0.22)	(Random)
Meltzer et al ^{ar}	Events 41 124 370	47 200 574	Events 33 102	48 207 290	10.7% 30.7% 58.6%	(Random Effects) 95% Cl 0.18 (0.02 to 0.35) 0.13 (0.03 to 0.22) 0.09 (0.02 to 0.16)	(Random)
Meltzer et al ²⁴ Nayak et al ¹⁴	Events 41 124 370	47 200 574 821	Events 33 102 160	48 207 290	10.7% 30.7% 58.6%	(Random Effects) 95% Cl 0.18 (0.02 to 0.35) 0.13 (0.03 to 0.22) 0.09 (0.02 to 0.16)	(Random)

Narrow-spectrum antibiotics, such as amoxicillin or trimethoprim/sulfamethoxazole, are recommended in patients with symptoms or signs of acute rhinosinusitis that do not improve after seven days,.

Oral corticosteroid prescribing habits for rhinosinusitis: The American .

Indication	CRSwP-AERD, %	CRSwP-AFS, %	CRSwP-NOS, %	CRSsP, %	ABRS, %
Before surgery	24	24.2	23.2	15.7	7.0
Symptom exacerbation	29.2	27.6	29.9	32.2	43.8
Trial of maximal medical therapy	24.8	21.6	26.1	33.6	29.8
Failure of topical therapy	19.5	17.2	20.1	17.1	15.8
Other	2.5	3.0	0.7	1.4	3.6

Acute sinusitis is an inflammation of the sinuses. Because sinus passages are contiguous with the nasal passages, rhinosinusitis is often a more appropriate term. Acute rhinosinusitis is a common diagnosis, accounting for approximately 30 million primary care visits and \$11 billion in healthcare expenditure annually. It is also a common reason for antibiotic prescriptions in the United States .

Short-course oral steroids alone for chronic rhinosinusitis



Short-course oral steroids alone for chronic rhinosinusitis (Review)

Head K, Chong LY, Hopkins C, Philpott C, Burton MJ, Schilder AGM



Short-course and storoids alone for chronic rhinosimusitis (Review) Copyright © 2016 The Cochrane Collaboration, Published by John Wiley & Sons, Ltd.

WILEY

Oral corticosteroids are used to control the inflammatory response and improve symptoms. Objectives To assess the effects of oral corticosteroids compared with placebo/no intervention or other pharmacological interventions (intranasal corticosteroids, antibiotics, antifungals) for chronic rhinosinusitis. Search methods

Prescribing systemic steroids for acute respiratory tract infections in .



J Prev Med Public Health 2020;53:82-88 • https://doi.org/10.3961/jpmph.19.090



Prescription of Systemic Steroids for Acute Respiratory Infections in Korean Outpatient Settings: Overall Patterns and Effects of the Prescription Appropriateness Evaluation Policy

Taejae Kim¹, Young Kyung Do^{1,2}

Department of Health Policy and Management, Secul National University College of Medicine, Secul, Korea; 'Institute of Health Policy and Management, Secul National University Medical Research Center, Secul, Korea

Objectives: The objective of this study was to identify individual and institutional factors associated with the prescription of systemic steroids in patients with acute respiratory infections and to investigate the role of a policy measure aimed to reduce inappropriate prescriptions.

Methods: We used data from the National Health Insurance Service-National Sample Cohort from 2006 to 2015 and focused on episodes of acute respiratory infection. Descriptive analysis and multiple logistic regression analysis were performed to identify individual-level and institution-level factors associated with the prescription of systemic steroids. In addition, steroid prescription rates were compared with antibiotic prescription rates to assess their serial trends in relation to Health Insurance Review and Assessment Service (HIRA) Prescription Appropriateness Evaluation policy.

Results: Among a total of 9 460 552 episodes of respiratory infection, the steroid prescription rate was 6.8%. Defined daily doses/1000 persons/d of steroid increased gradually until 2009, but rose sharply since 2010. The steroid prescription rate was higher among ear, nose and throat specialties (13.0%) than other specialties, and in hospitals (8.0%) than in tertiary hospitals (3.0%) and other types of institutions. Following a prolonged reduction in the steroid prescription rate, this rate messed since the HIRA Prescription Appropriateness Evaluation dropped steroids from its list of evaluation items in 2009. Such a trend reversal was not observed for the prescription rate of antibiotics, which continue to be on the HIRA Prescription Appropriateness Evaluation list.

Conclusions: Specialty and type of institution are important correlates of steroid prescriptions in cases of acute respiratory infection. Steroid prescriptions can also be influenced by policy measures, such as the HIRA Prescription Appropriateness Evaluation policy.

Key words: Inappropriate prescribing, Glucocorticoids, Respiratory tract Infections, Health Insurance Review and Assessment Service Prescription Appropriateness Evaluation

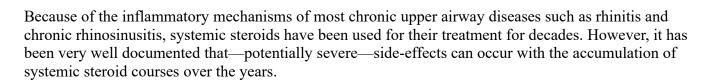
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INTRODUCTION

The prescription practice of a medical provider is largely influenced by individual characteristics of the patient, such as sex, age, and income, as well as by institutional characteristics, such as institution type, specialty, and region [1-3]. Healthcare policy factors such as evaluation and monitoring of prescription appropriateness, feedback and public disclosure of the



- <u>https://publiclab.org/notes/print/46184</u>
- https://telegra.ph/Non-Ho-Mai-Smesso-Di-Lottare-Testo-02-09
- <u>https://groups.google.com/g/39lifting92/c/2ptGJUxfBjw</u>