



Astımda Ne Deęiřti Ne Deęiřmedi

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Fak ltesi G ę s Hastalıkları AD ve Yoęun
Bakım BD

Sunum Planı

- Epidemiyoloji
- Tedaviye uyum
- Astımda kontrol
- Yenilikler
- Sonuç

Epidemiyoloji

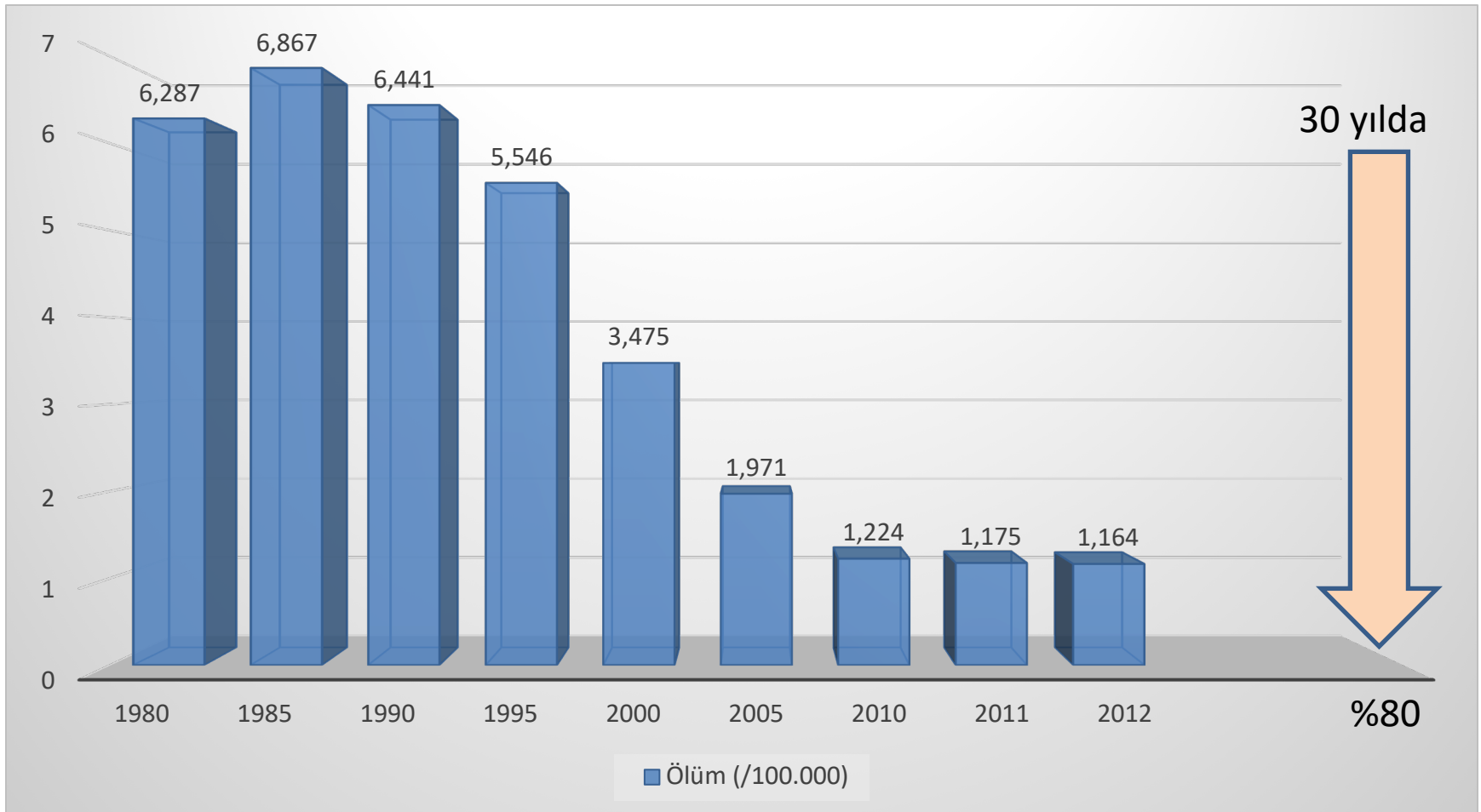


Epidemiyoloji

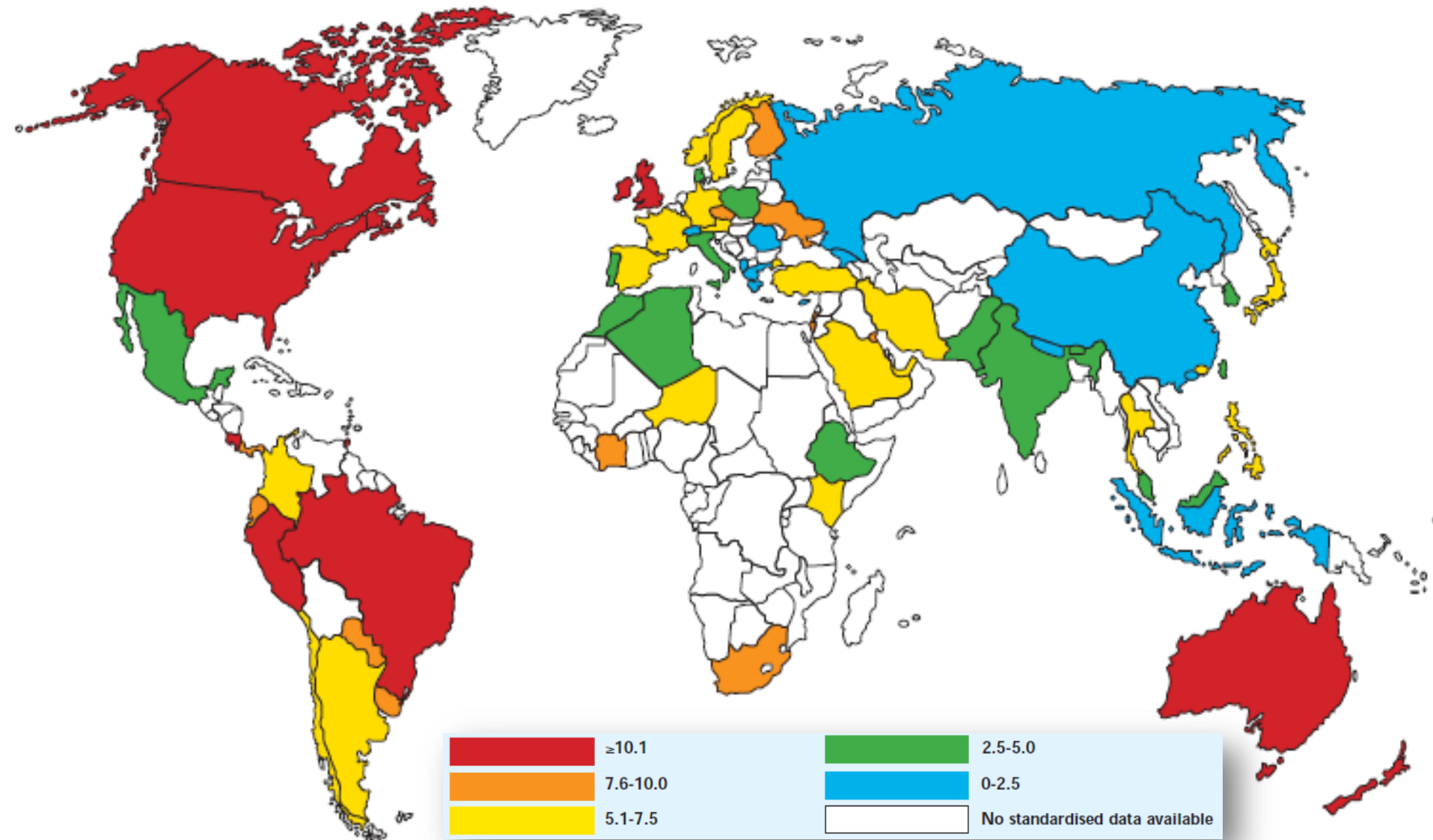
- Dünyada yaklaşık
 - **300 milyon kişiyi** etkilediği
 - Ülkemizde yaklaşık 3,5 milyon kişi
- Prevalans
 - Çocuklarda %2-15
 - Erişkinlerde %2-5

- 20 milyon astımlı hasta (2001-2003)
 - 6.2 milyon çocuk
 - 13.8 milyon erişkin
 - 2 milyon >65y
- 1.8 milyon'u acile,
- 504.000'i hastaneye yatarken,
- 4210 hastada ölüm gözlendiği bildirilmiştir.
 - Böylece acile giden ve ağır atak olarak tedavi edilmesi gereken astımlı hastalar tüm astımlı hastaların %5-10'nu oluşturmaktadır.
- Bu %5-10'luk kısmının çok az bir kısmıda MV ihtiyacı göstermektedir.
- Bu hastalada ölüm oranının ise %1-26.7 olduğu bildirilmiştir

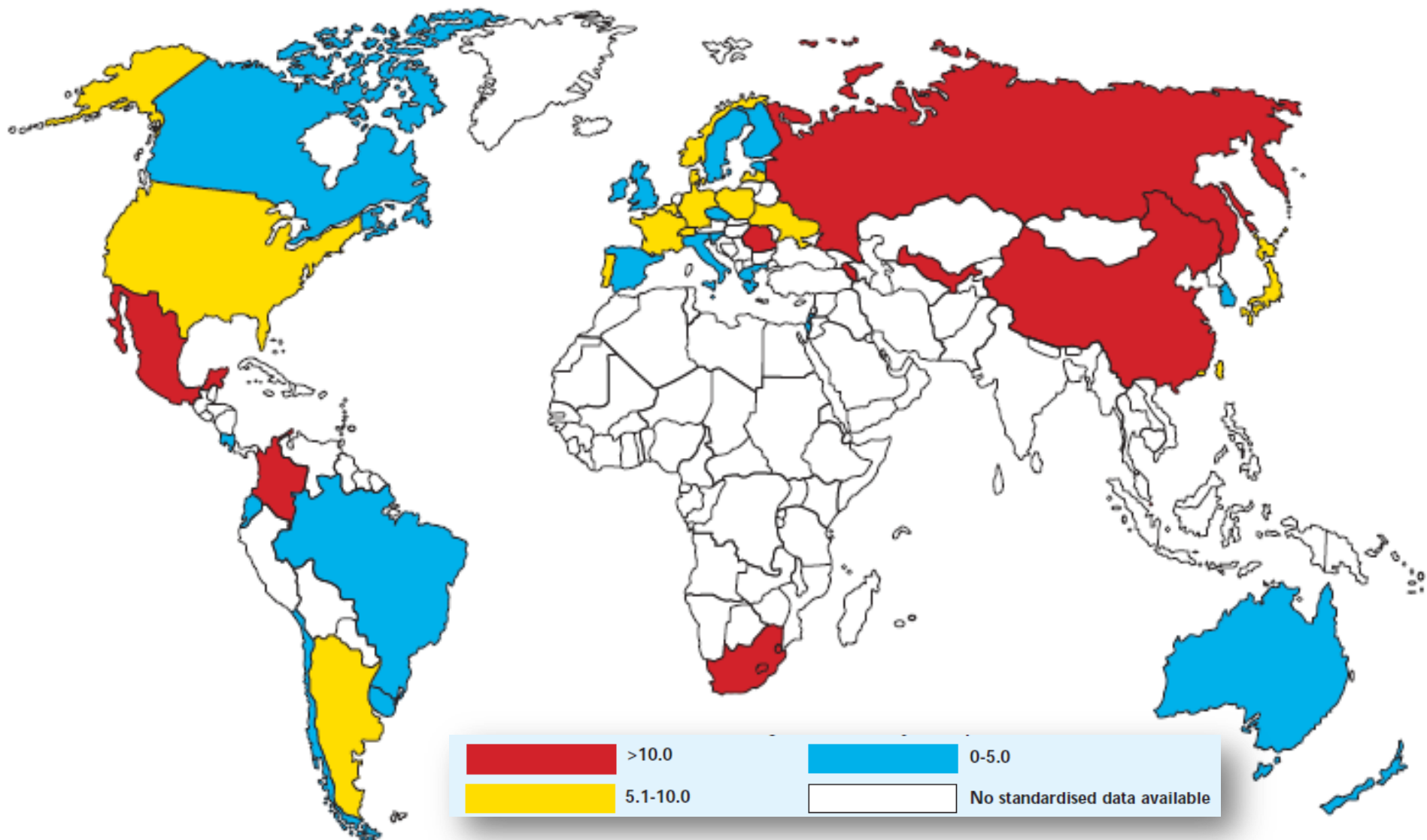
Astım (Avrupa)



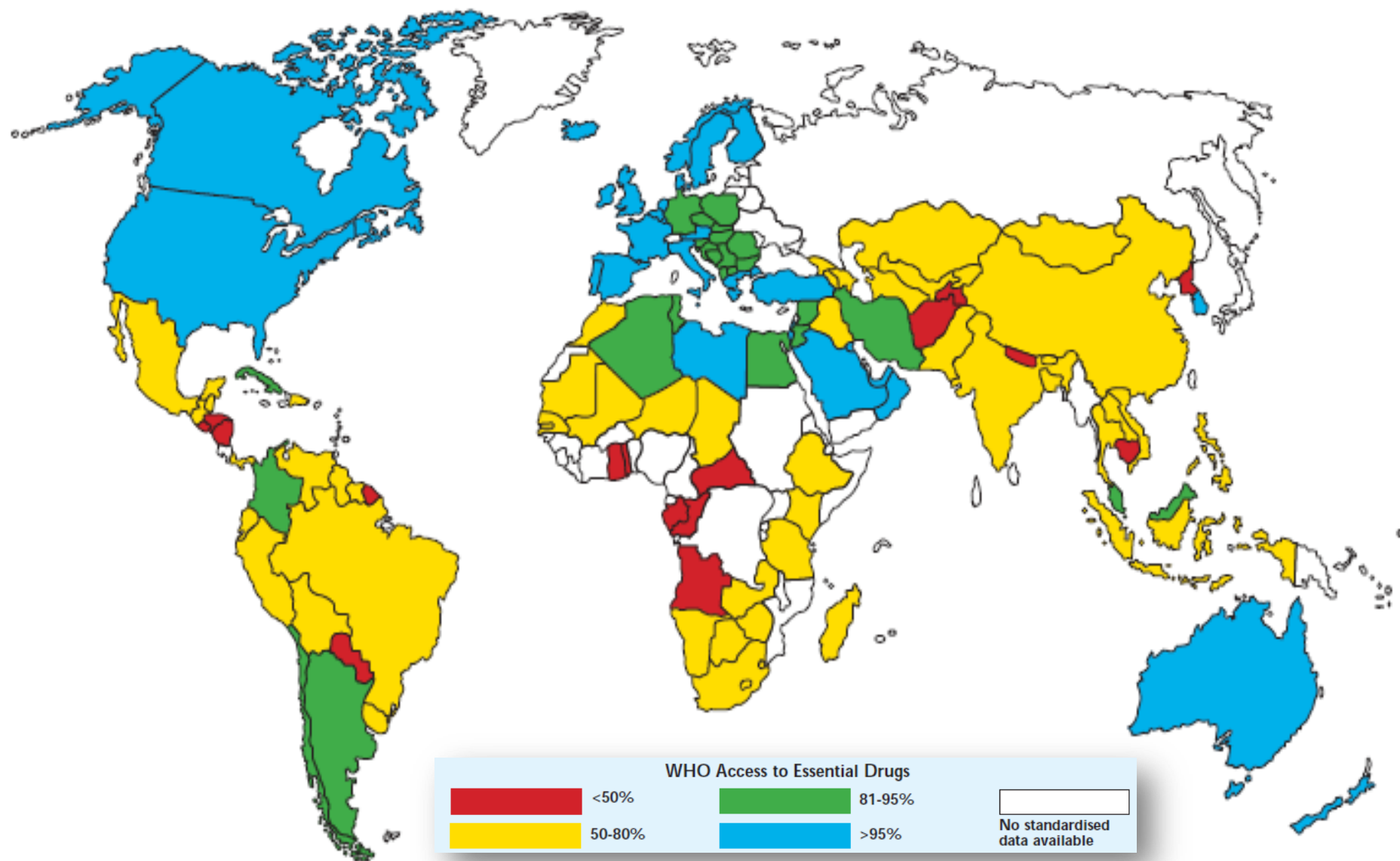
World Map of the Prevalence of Clinical Asthma



World Map of Asthma Case Fatality Rates (Asthma deaths per 100,000 asthmatics)

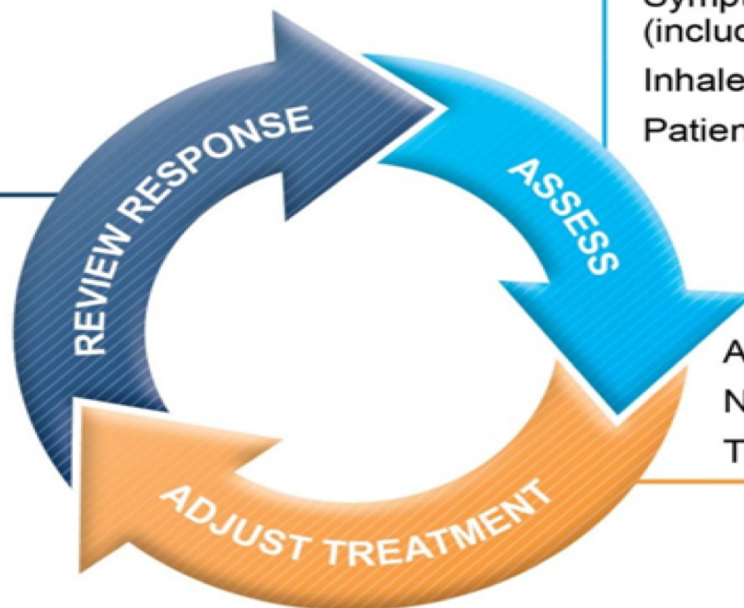


World Map of the Proportion of the Population with Access to Essential Drugs



Tedavi





Diagnosis
Symptom control & risk factors
(including lung function)
Inhaler technique & adherence
Patient preference

Symptoms
Exacerbations
Side-effects
Patient satisfaction
Lung function

Asthma medications
Non-pharmacological strategies
Treat modifiable risk factors

STEP 1

STEP 2

STEP 3

STEP 4

STEP 5

Low dose ICS

Low dose
ICS/LABA*

Med/high
ICS/LABA

Refer for
add-on
treatment
e.g.
anti-IgE

Consider low
dose ICS

Leukotriene receptor antagonists (LTRA)
Low dose theophylline*

Med/high dose ICS
Low dose ICS+LTRA
(or + theoph*)

High dose
ICS+LTRA
(or + theoph*)

Add low
dose OCS

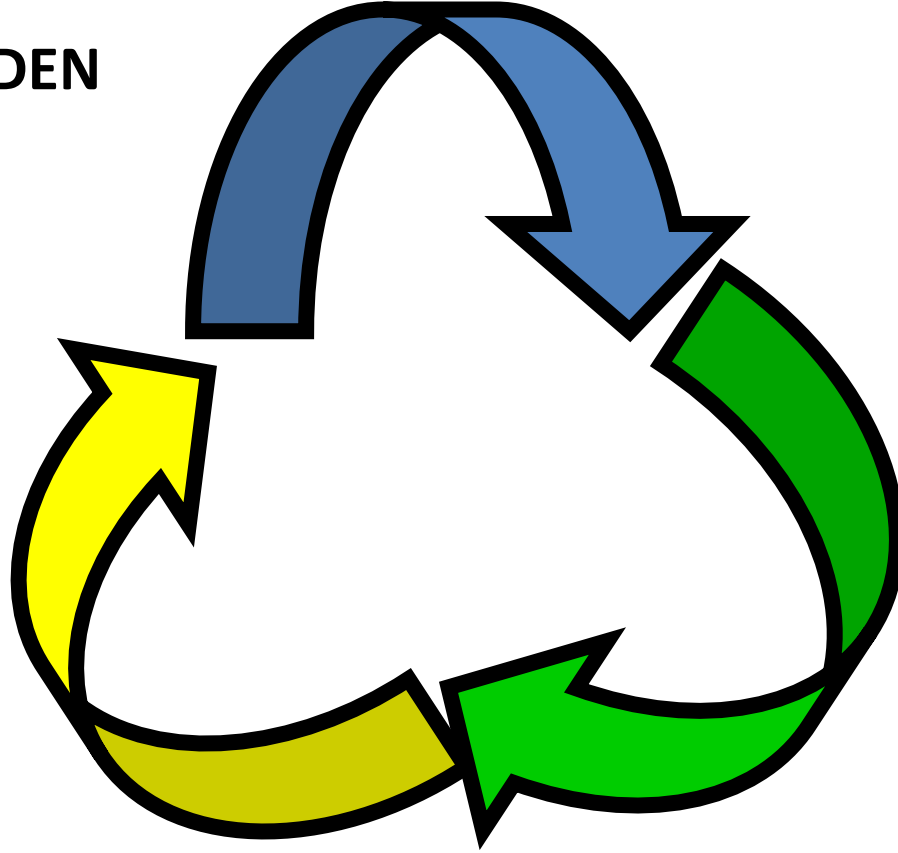
As-needed short-acting beta₂-agonist (SABA)

As-needed SABA or
low dose ICS/formoterol**

GINA - KONTROLE DAYALI ASTIM YÖNETİMİ

YANITIN GÖZDEN GEÇİRİLMESİ

- Semptomlar
- Atak
- Yan etkiler
- Hasta memnuniyeti
- Akciğer fonksiyonları



DEĞERLENDİRME

- Teşhis
- Semptom ve risk faktörü kontrolü (akciğer fonksiyonları dahil)
- İnhaler tekniği ve uyum
- Hasta tercihi

TEDAVİ EKLENMESİ

- Astım ilaçları
- Nonfarmakolojik stratejiler
- Değiştirilebilir risk faktörlerinin düzeltilmesi

Astımda Uyum



Astım Tedavi Farklılığı/Uyum



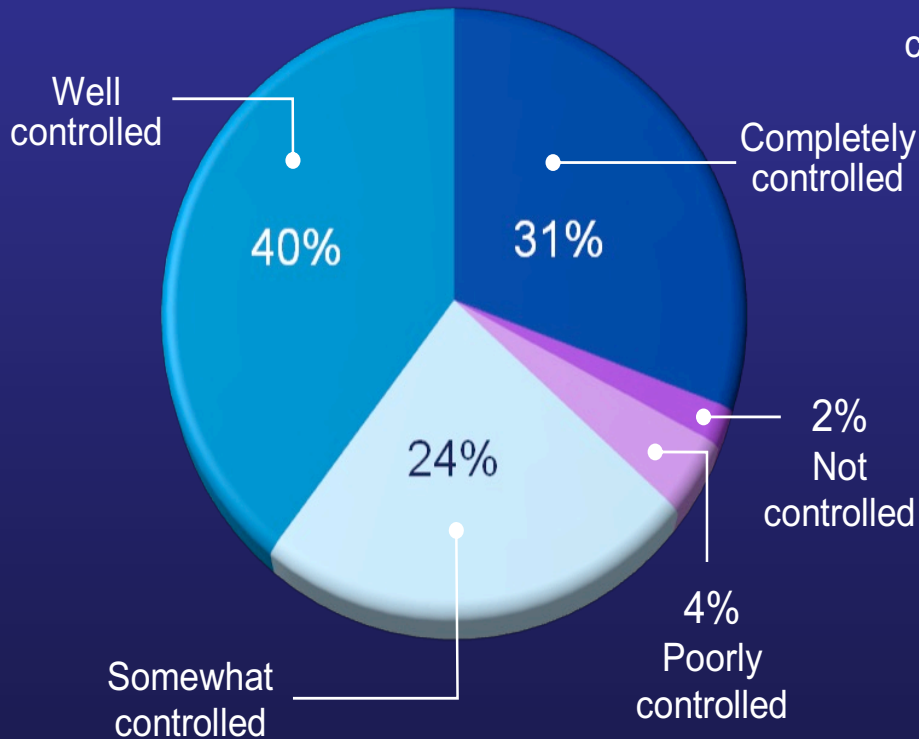
`Bir saęlık görevlisinin vermiř tavsiyelere kiřinin uyum gsterme derecesi` (WHO)



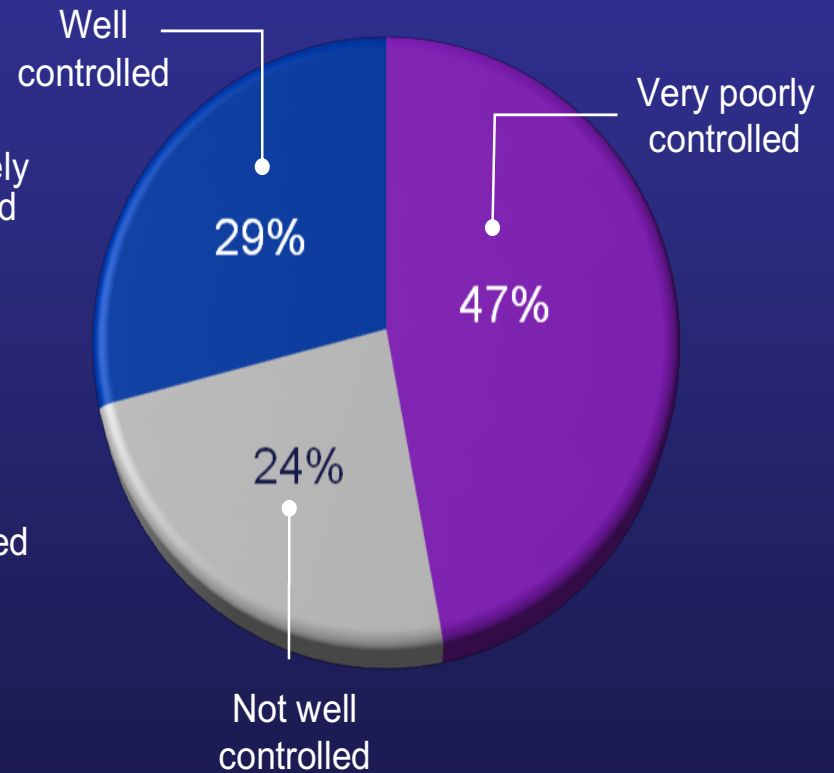
Hastanın görüşü

Asthma control in the past 4 weeks

Patient Perspective*

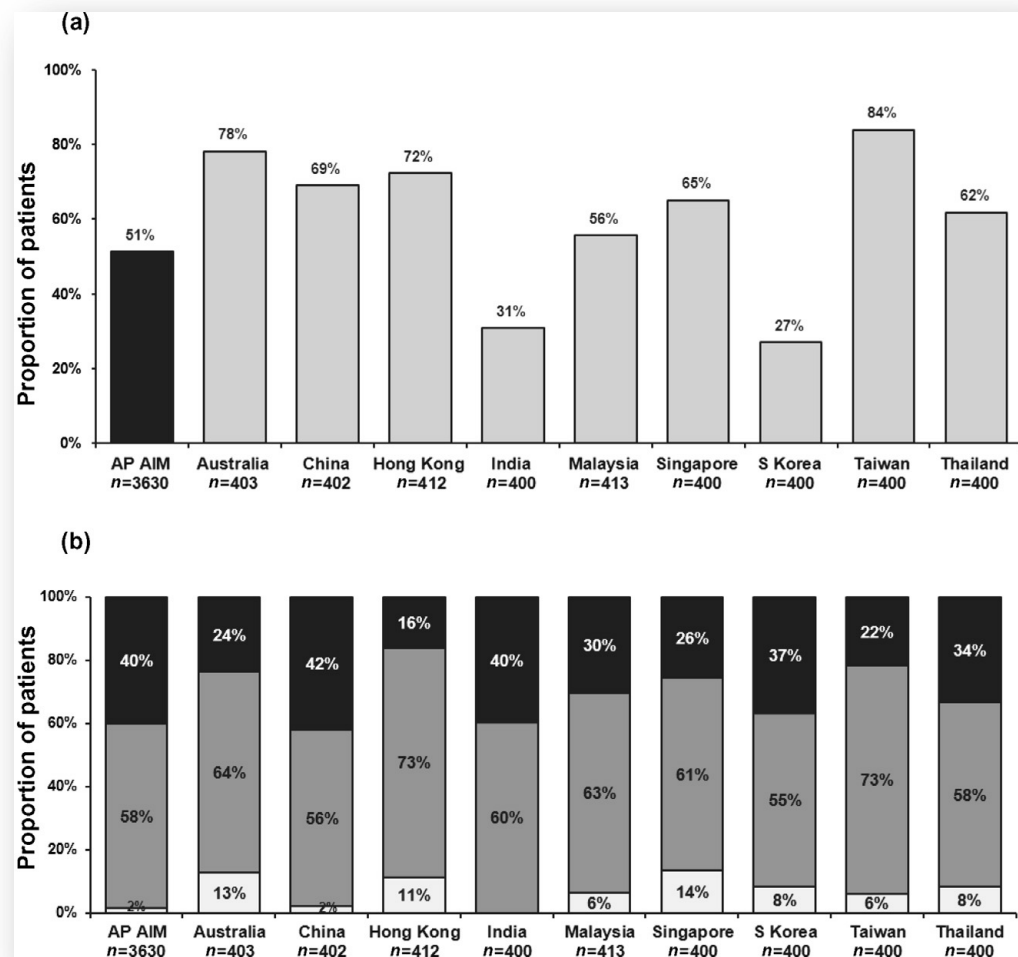


Control Classification*†



Insights, attitudes and perceptions about asthma and its treatment: Findings from a multinational survey of patients from 8 Asia-Pacific countries and Hong Kong

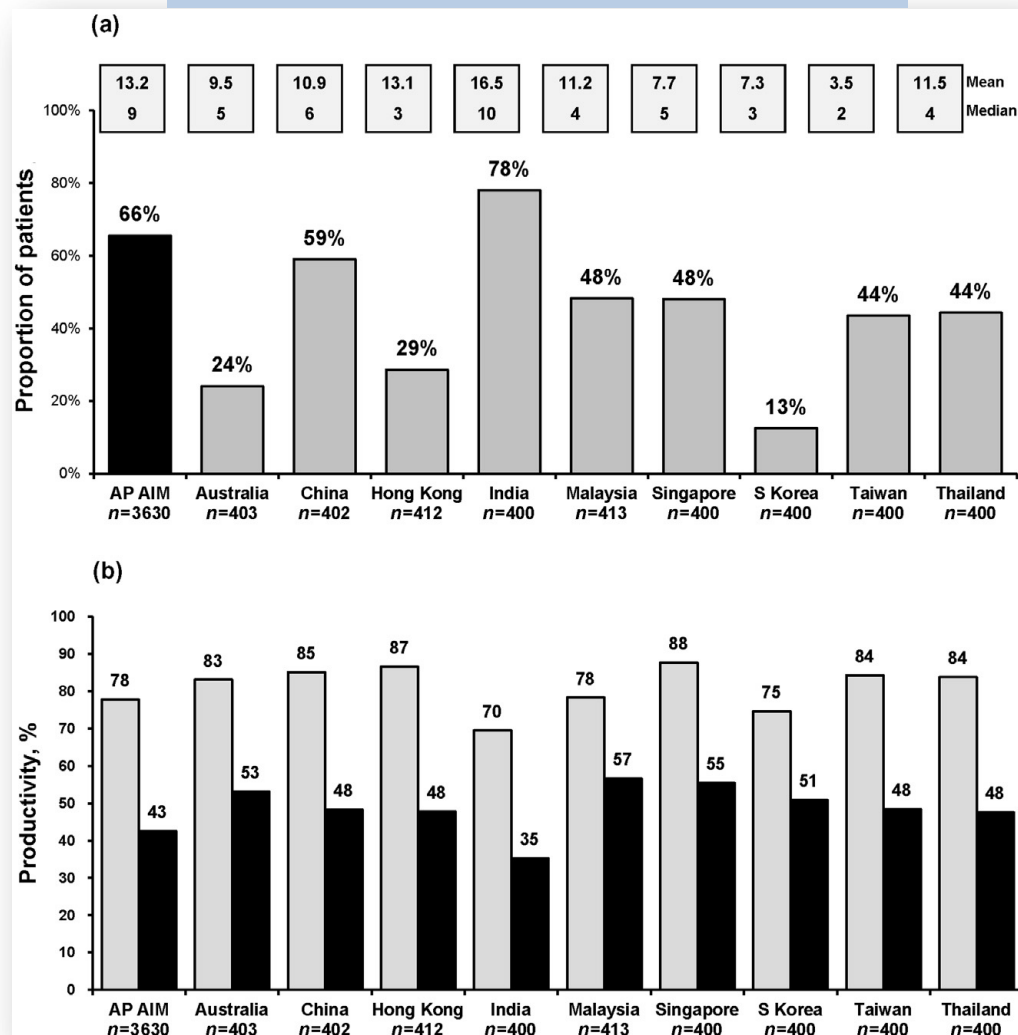
9 Ülke
80761 kişi
3630 katılım
Astım ile
ilgili 53 soru



■ Kısmi kontrol
■ Kontrolsüz
□ Kontrol altında

Insights, attitudes and perceptions about asthma and its treatment: Findings from a multinational survey of patients from 8 Asia-Pacific countries and Hong Kong

İş ve okula gitmeme bildirimi



Neden uyumsuzluk



Patients' perspective of barriers and facilitators to taking long-term controller medication for asthma: a novel taxonomy

Sandra Peláez¹, Alexandrine J Lamontagne¹, Johanne Collin², Annie Gauthier¹, Roland M Grad³, Lucie Blais², Kim L Lavoie⁴, Simon L Bacon⁵, Pierre Ernst^{6,7}, Hélène Guay⁸, Martha L McKinney⁹ and Francine M Ducharme^{1,7,9,10,11*}

Abstract

Background: Although asthma morbidity can be prevented through long-term controller medication, most patients with persistent asthma do not take their daily inhaled corticosteroid. The objective of this study was to gather patients' insights into barriers and facilitators to taking long-term daily inhaled corticosteroids as basis for future knowledge translation interventions.

Methods: We conducted a collective qualitative case study. We interviewed 24 adults, adolescents, or parents of children, with asthma who had received a prescription of long-term inhaled corticosteroids in the previous year. The one-hour face-to-face interviews revolved around patients' perceptions of asthma, use of asthma medications, current self-management, prior changes in self-management, as well as patient-physician relationship. We sought barriers and facilitators to optimal asthma management. Interviews were transcribed verbatim and transcripts were analyzed using a thematic approach.

Results: Patients were aged 2–76 years old and 58% were female. Nine patients were followed by an asthma specialist (pulmonologist or allergist), 13 patients by family doctors or pediatricians, and two patients had no regular follow-up. Barriers and facilitators to long-term daily inhaled corticosteroids were classified into the following loci of responsibility and its corresponding domains: (1) patient (cognition; motivation, attitudes and preferences; practical implementation; and parental support); (2) patient-physician interaction (communication and patient-physician relationship); and (3) health care system (resources and services). Patients recognized that several barriers and facilitators fell within their own responsibility. They also underlined the crucial impact (positive or negative) on their adherence of the quality of patient-physician interaction and health care system accessibility.

Conclusions: We identified a close relationship between reported barriers and facilitators to adherence to long-term daily controller medication for asthma within three loci of responsibility. As such, patients' adherence must be approached as a multi-level phenomenon; moreover, interventions targeting the patient, the patient-physician interaction, and the health care system are recommended. The present study offers a potential taxonomy of barriers and facilitators to adherence to long-term daily inhaled corticosteroids therapy that, once validated, may be used for planning a knowledge translation intervention and may be applicable to other chronic conditions.

Keywords: Asthma, Patient perspective, Adherence, Long-term daily controller medication, Inhaled corticosteroids, Barriers, Facilitators

Patients' perspective of barriers and facilitators to taking long-term controller medication for asthma: a novel taxonomy

Sandra Peláez¹, Alexandrine J Lamontagne¹, Johanne Collin², Annie Gauthier¹, Roland M Grad³, Lucie Blais², Kim L Lavoie⁴, Simon L Bacon⁵, Pierre Ernst^{6,7}, Hélène Guay⁸, Martha L McKinney⁹ and Francine M Ducharme^{1,7,9,10,11*}

- Bilgi düzeyi
 - Astım'ın ciddi bir hastalık olmadığı
 - Semptomlar olduğunda ilaç alımı
 - Kronik bir hastalık olmadığı
 - İlaç bağımlılığı korkusu
 - İlaçlar sadece semptomlara yanıt olarak kullanılmalıdır, kronik olarak kullanılmalıdır
 - Tetikleyicileri sezdiğinde ilaç kullanılması
 - İlaçlar hakkında bilgi azlığı
 - Yan etkilerinden korkma (prospektüs okuma)
 - İlaçların faydasına inanmama
 - Zamanla ilaçların etkinliğinin azaldığı
 - Giderek artan dozda ilaç kullanımı
- Motivasyon, davranış ve tercihler
 - Unutkanlık
 - Motivasyon eksikliği
 - Non-farmakolojik yaklaşımları uygulama
 - İlaç alma yerine semptoma neden olacak fiziksel aktivasyon kısıtlamasına gitmeyi tercih etme
- Hasta-doktor ilişkisi
 - Zaman ayırma
 - Doküman verme
 - Kendi kendine kontrol edebilmeyi öğretme

Why aren't we doing better in asthma: time for personalised medicine?

Mike Thomas^{1,2,3,4}

After decades of improvement, asthma outcomes have stalled. Mortality, hospitalisations, exacerbations and symptom control remain sub-optimal. In controlled trials, most patients gain high levels of control, but in 'real-life' routine clinical practice most patients do not. Avoidable factors are found in most asthma deaths and hospital admissions. This perspective paper considers and

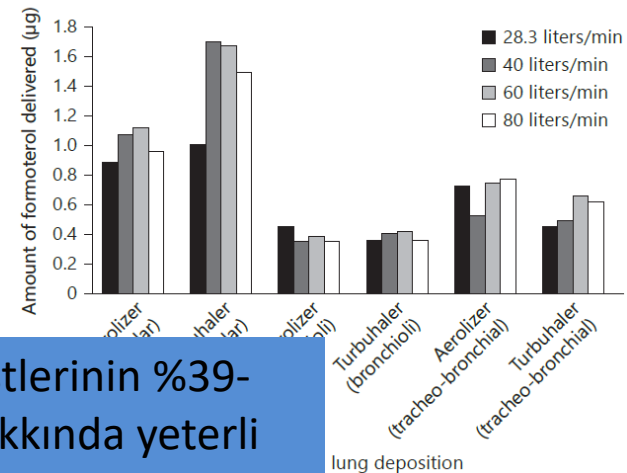
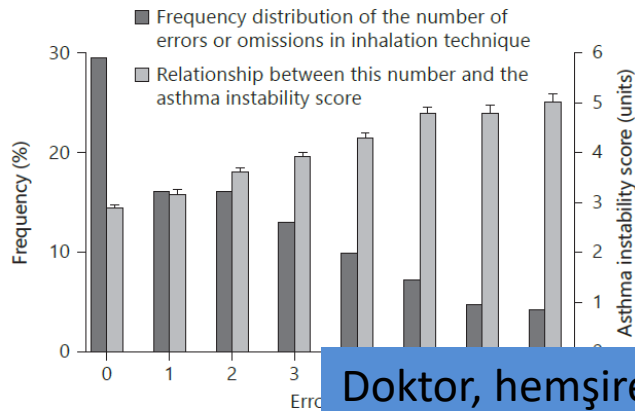
*Yıllar geçiyor fakat
aynı problemler devam
ediyor*

and education to support efficient self-management. Strategies for improving monitoring and clinician–patient interactions to allow personalised treatment are considered. These strategies have the potential to allow individual patient needs to be recognised and efficient targeting of the variety of effective pharmacological and non-pharmacological interventions that we possess, which has the potential to improve both individual and population outcomes.

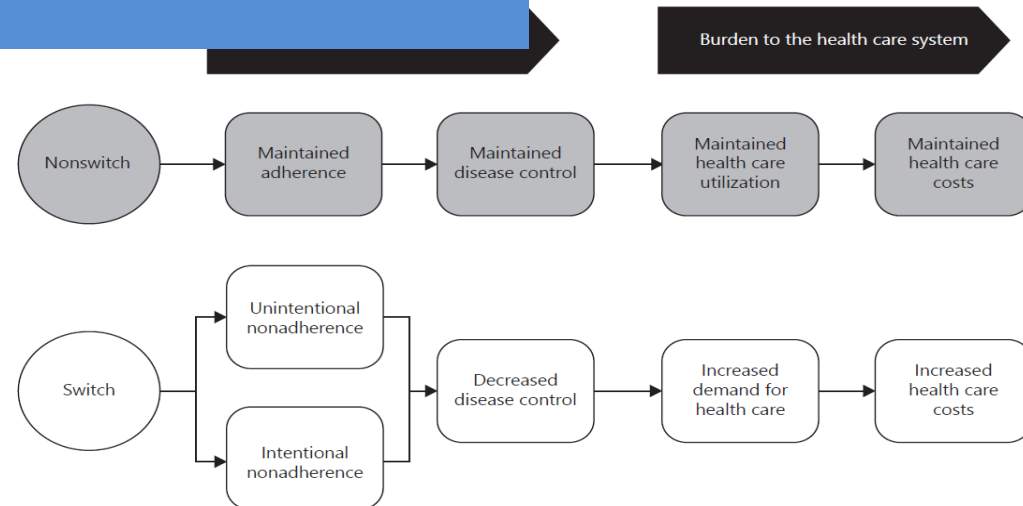
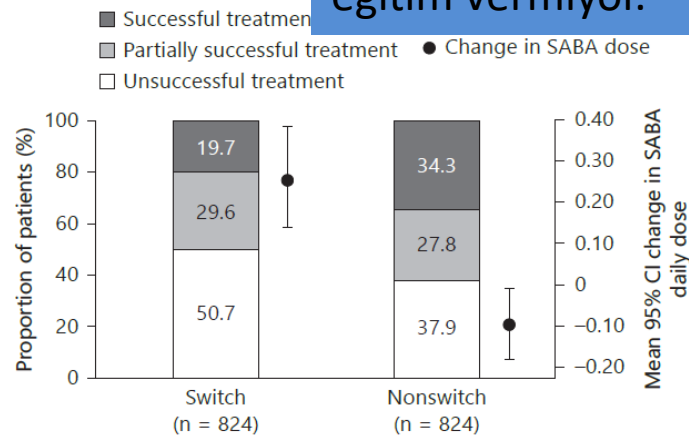
The Importance of Continuity in Inhaler Device Choice for Asthma and Chronic Obstructive Pulmonary Disease

Leif Bjermer

Respiration 2014;88:346–352



Doktor, hemşire ve solunum terapistlerinin %39-67'si hastalara ilaçların kullanımı hakkında yeterli eğitim vermiyor.



Negative impact of asthma on patients in different age groups*

Impacto negativo da asma em diferentes faixas etárias

Marcela Batan Alith, Mariana Rodrigues Gazzotti, Federico Montealegre, James Fish, Oliver Augusto Nascimento, José Roberto Jardim

Table 2 - Activities of daily living affected by asthma in 400 asthma patients interviewed in one of four Brazilian state capitals and stratified by age group.^a

Variable	Age group, years			p*
	12-17	18-40	≥ 41	
	(n = 43)	(n = 185)	(n = 172)	
Episode of severe asthma that prevented the patient from playing or exercising	23 (53.5)	76 (41.1)	52 (30.2)	0.012
Episode of severe asthma that forced the patient to leave school or work	24 (55.8)	93 (50.3)	63 (36.6)	0.104
School or work absenteeism	29 (67.4)	75 (40.5)	48 (27.9)	< 0.001

^aValues expressed as n (%). *Chi-square test.

Table 5 - Questions regarding treatment in 400 asthma patients interviewed in one of four Brazilian state capitals and stratified by age group.^a

Variable	Age group, years			p*
	12-17	18-40	≥ 41	
	(n = 43)	(n = 185)	(n = 172)	
Had heard of peak flow meters	22 (51.2)	64 (34.6)	66 (38.4)	0.334
Owned a peak flow meter	4 (9.3)	4 (2.1)	8 (4.6)	0.248
Had a written action plan for asthma management	19 (44.2)	75 (40.5)	74 (43.0)	0.210
Had used asthma relief or control medication in the last 4 weeks	12 (27.9)	42 (22.7)	50 (29.1)	0.496
Had discontinued asthma relief or control medication in the last 12 months	21 (48.8)	70 (37.8)	55 (31.9)	0.008

^aValues expressed as n (%). *Chi-square test.

Factors associated with poor asthma control in the outpatient clinic setting

Jamaan M. Al-Zahrani, Anwar Ahmad¹, Abdullah AL-Harbi², Ayaz M Khan², Bader Al-Bader, Salim Baharoon², Abdullah AL Shememeri², Hamdan AL-Jahdali²

Abstract:

BACKGROUND/OBJECTIVES: The goal of the study was to assess asthma control using asthma control test (ACT) and to evaluate factors associated with poor asthma control in the outpatient clinic setting.

METHODS: The study was conducted in the outpatient clinic at King Abdulaziz Medical City in Riyadh. Adult patients who were diagnosed with bronchial asthma by their primary treating physician were recruited over a 6-month period. Patients completed the ACT and questionnaires, which identified factors that affect asthma control.

RESULTS: Fifty-four percent of the patients were women. Fifty-four percent of the patients had poor asthma control. Fifty-four percent of the patients had poor asthma control at the time of the study was 59.6%. Inappropriate device use by the patient was more frequently associated with uncontrolled asthma (P -value = 0.001). Active smoking (P -value = 0.007), passive smoking (P -value = 0.019), unsealed mattress (P -value = 0.030), and workplace triggers (P -value = 0.036) were also associated with uncontrolled asthma. However, the extent of asthma control did not appear to be related to the existence of asthma or the duration of asthma.

CONCLUSION: The study showed that poor asthma control is associated with inappropriate device use, active and passive smoking, unsealed mattress, and workplace triggers in the outpatient clinic setting.

%54 uygunsuz ilaç kullanımı

% 39 hasta kontrol altında değil

Aktif ve pasif sigara içiciliği, iş yeri maruziyeti, uygun olmayan yatak odası

Administration Technique and Acceptance of Inhaler Devices in Patients With Asthma or COPD

Annals of Pharmacotherapy
2015, Vol. 49(6) 639–648
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DOI: 10.1177/1060028015579097
aop.sagepub.com



Abstract

Background: Correct technique and patient acceptance of inhalation devices for lung disease influence successful long-term management. Patient ability to use the proper technique may differ depending on the device as well as patient factors. **Objectives:** The objectives of our study are to measure self-reported level of acceptability of inhaler devices in community settings and compare correct use of inhaler devices using a novel scale for measuring appropriate inhaler technique. **Methods:** Fifty patients with asthma and/or COPD were recruited from a community setting. The study was conducted in a community setting. The scores were compared based on patient characteristics. **Results:** A total of 101 patients completed the study. The results show that acceptability was lowest for the pressurized metered dose inhaler (pMDI) with a spacer (S); effective use was best demonstrated with pMDI and poorest with pMDI-S. Older patients were found to be more accepting of the HandiHaler device than younger patients. Patients reporting taking more inhaled drugs were found to be more accepting of the pMDI-S than those taking fewer drugs. Finally, patients reporting taking more inhaled drugs demonstrated less-effective use of the HandiHaler device than patients taking fewer drugs. **Conclusion:** Pulmonary disease duration does not ensure improved use for all inhalers; patients taking more drugs demonstrate less-effective use for some devices. Assessment of patient acceptance and factors that predict the ability to use a device should be considered to individualize therapy.

ilaçlar arasında çok az farklılıklar var

Astım ve KOAH'lı hastalar için inhaler seçiminde inspiratuar akım hızının önemi

Cengizhan Sezgi ¹, Bülent Özbay ¹, Mehmet Kara ², Ekrem Doğan ³
Ayten İşlek ¹, Kürsat Uzun ¹

¹ Yüzüncü Yıl Üniversitesi Tıp Fakültesi, Göğüs Hastalıkları Anabilim Dalı,

² Yüzüncü Yıl Üniversitesi Tıp Fakültesi, Fizyoloji Anabilim Dalı,

³ Yüzüncü Yıl Üniversitesi Tıp Fakültesi İç Hastalıkları Anabilim Dalı. Van

Özet

The role of peak inspiratory flow rate for inhaler choice in patients with asthma and COPD

Fark yok

Gereç ve Yöntem: Çalışmaya farklı şiddetlerdeki 74 KOAH lı ve 41 Astımlı hasta alındı. Hastalara eş zamanlı SFT ile farklı kuru toz inhalerlerin iç dirençlerine ve oluşturdıkları akım kısıtlamalarına göre dizayn edilmiş İn-check cihazı uygulandı.

Bulgular: İn-check cihazında ölçülen Peak inspratu- ar akım hızlarının SFT de ölçülen ile uyumlu olduğu görüldü. Astım ve KOAH da FVC, ve PIF daki kısıt- lamaların, hastalığın şiddeti ile korele olduğu gözlemlendi.

Sonuç: Surraller astım ve KOAH ın özellikle ağır ve orta şiddetlerinde diğer kuru toz inhalerlerden anlamlı olarak daha yüksek akım hızlarına izin verdiği yani daha düşük iç dirence sahip olduğu görüldü.

Anahtar kelimeler: İn- Check, İnspiratuar akım hızı, inhaler ilaçlar

COPD with pulmonary function tests (PFT) and in check apparatus and second to compare it with current velocity at different dry powder inhaler.

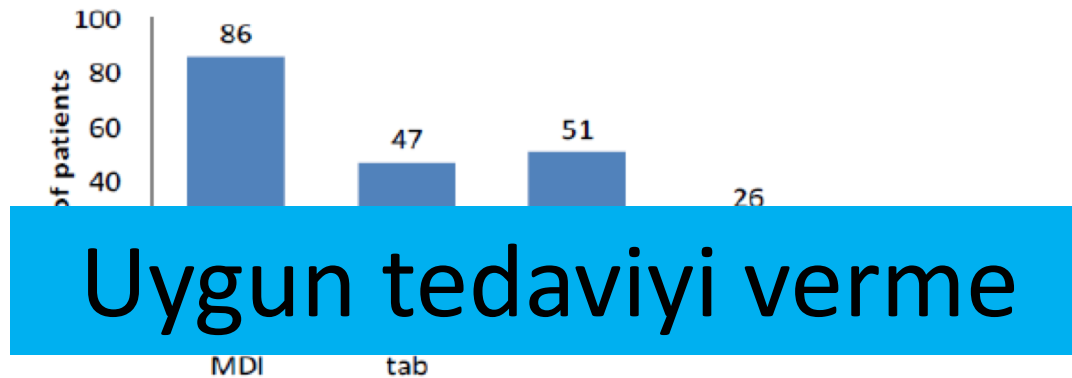
Methods: Seventy-four patients with different degree of COPD and 41 patients with asthma were included in the study. In-check apparatus and PFT were performed at the same time to patients. Flow rates which occurred for Discus (D), Turbohaler (T), Autohaler (A), and Surehaler (S) were recorded and PIF (in-PIF) without inspiratory restriction was measured with in-check apparatus.

Results: The current velocity at PFT is harmony with the current velocity with in check apparatus. The reduction of FVC and PIF at asthma and COPD is seen corelated with the degree of the disease.

Conclusion: Surehaler permitted significantly higher flow rates more than other dry powder inhalers, especially in moderate and sever stages of Asthma and COPD (Lower inner resistance).

Evaluation of asthma control by inhaled corticosteroids in general practice in Thailand

Watchara Boonsawat¹ and Bandit Thinkhamrop²



Uygun tedaviyi verme

Methods: This cross-sectional study involved 1,206 patients with persistent asthma and was conducted at 38 hospitals across Thailand between May and November, 2009. Patients were enrolled if they were >12 years old, had persistent asthma, receiving ICS with/without controllers other than long-acting beta2-agonists (LABA) for at least 3 months, and smoked <10 packs-year.

Conclusions: In clinical practice, patients using ICS alone or combined with theophylline or short-acting b2 agonists had a low percentage of asthma control and a high number of urgent care visits. ICS either alone or combined with theophylline or short-acting b2 agonists is not sufficient. (*Asian Pac J Allergy Immunol* 2015;33:21-25)

Astımda Kontrol Nasıl Sağlanır



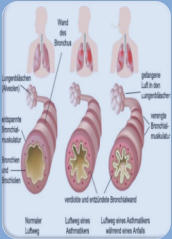
Kılavuzların kliniğe uygulanması

- Hastaların %30-40'ı bir tedavi programından faydalanmıyor.
- İlaçların %20-25'i gereksiz kullanılıyor ve zararlı hale geliyor.



Uyku problemleri

- Astımda iki kat daha fazla OSA



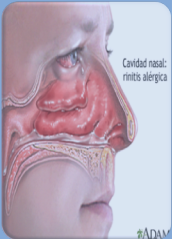
Hastalıkla ilişkili faktörler

- GÖR
- Uyku bozuklukları ve OSA
- Rinit



GÖR

- Astımlı hastalar %80
- pH metre ile %38



Rinit

- Rinitli hastaların %20-60'ı astım
- Allerjik astımlı hastaların >%80 rinit
- Rinitli hastalar 3-5 kat daha fazla astımı kötü kontrol



Hasta ilişkili faktörler

- Akut hastalıklarda %20-40
- Kronik hastalıklarda %30-60
- Astımda %28-43 (WHO)



Doktor ilişkili faktörler

- Pratisyenler %20, Uzmanlar %43 ACT gibi materyalleri kullanıyor

Astım semptom kontrolü			Semptom kontrolünün seviyesi		
Son 4 hafta içinde hastanın yaşadığı;			Tam kontrol	Kısmi kontrol	Kontrol altında değil
Haftada 2'den fazla astım semptomu	Evet ☐	Hayır ☐			
Astım nedeni ile herhangi bir gece uyanma	Evet ☐	Hayır ☐	Hiçbiri yok	Bunlardan 1-2'si	Bunlardan 3-4'ü
Haftada 2'den fazla rahatlatıcı ilaç kullanma ihtiyacı	Evet ☐	Hayır ☐			
Astım nedeni ile herhangi bir aktivitenin kısıtlanması	Evet ☐	Hayır ☐			

Astım Kontrol Testi



Astım Kontrol Testi™

1. Son 4 haftada astımınız sizin işte, okulda veya evde yapmak istediklerinizi ne kadar etkiledi?

Tamamen 1 Çoğunlukla 2 Bazen 3 Nadiren 4 Hiçbirzaman 5

2. Son 4 haftada süresince ne kadar sıklıkta nefes darlığı hissettiniz?

Günde bir kezden fazla 1 Günde bir kez 2 Haftada 3-6 kez 3 Haftada 1-2 kez 4 Hiçbirzaman 5

3. Son 4 haftada süresince astım şikayetlerinizi kaç gece veya sabah sizi normal kalkış saatinden önce uyandırdı?

Hatada en az dört gece 1 Hatada iki-üç gece 2 Hatada bir kez 3 Bir veya iki kez 4 Hiçbirzaman 5

4. Son 4 haftada süresince rahatlatıcı inhaller cihazınızı veya sablutamol türü nebulizer cihazınızı kaç kez kullandınız?

Günde üç kez veya daha sık 1 Günde 1 veya 2 kez 2 Haftada 2 veya 3 kez 3 Haftada 1 kez veya daha az 4 Hiçbirzaman 5

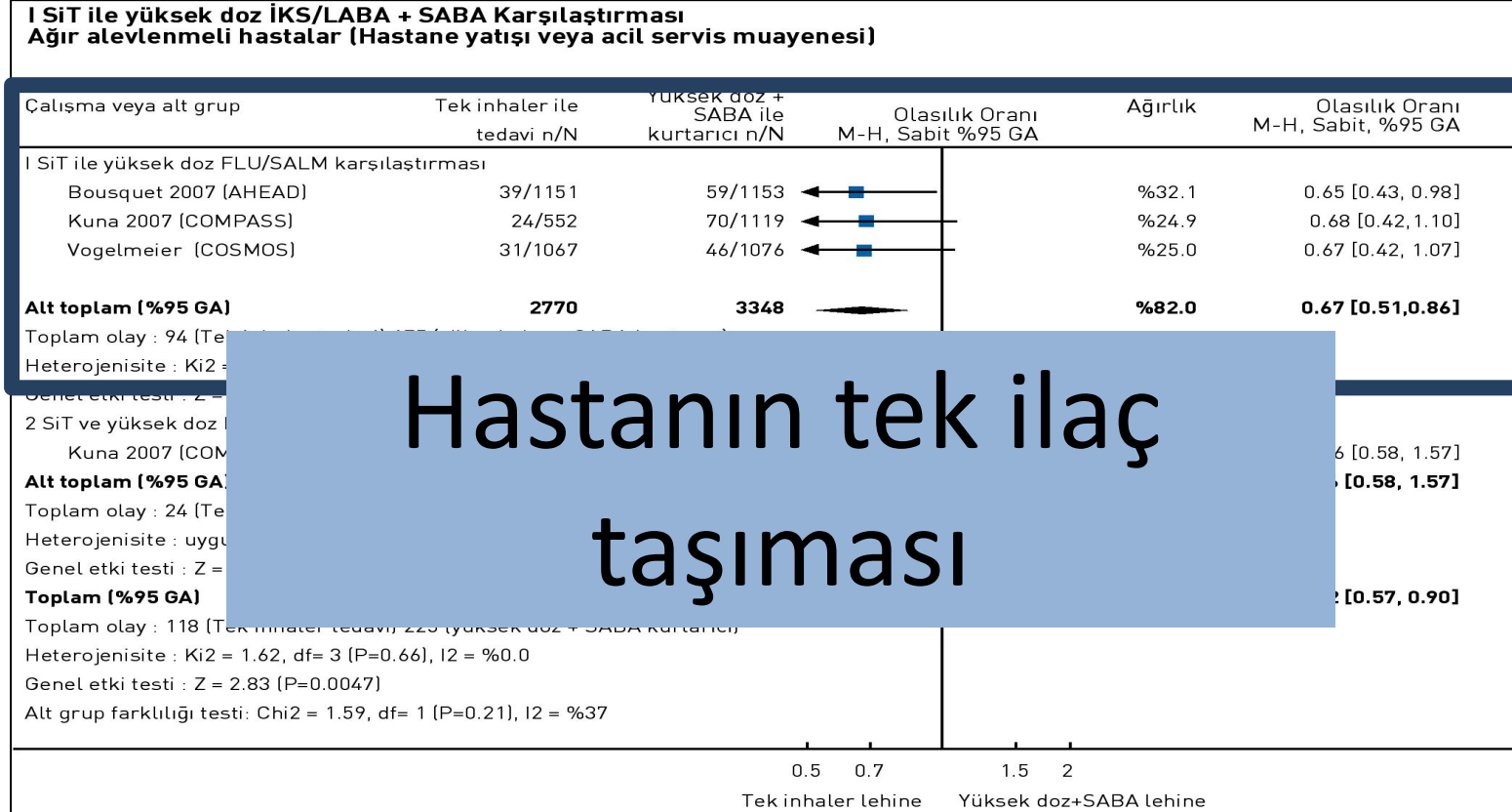
5. Son 4 haftada astım kontrolünüzü nasıl değerlendirdiniz?

Hiç kontrol altında değil 1 Zayıf düzeyde 2 Haftada 2 veya 3 kez 3 İyi düzeyde 4 Tamamen kontrol altında 5

Hasta toplam puanı:

Değerlendirme: Her sorunun cevabıyla ilişkili puanlar yazılır. Beş puanın toplamı toplam puanı oluşturur [Toplam puan 25: Tam kontrol, 24-20: kısmi kontrol, ≤19 kontrol altında değil].

İDAME VE KURTARICI TEDAVİ OLARAK BUD/FORM İLE İDAME TEDAVİ OLARAK İNHALER KOMBİNASYON KULLANIMININ KARŞILAŞTIRMASI (Cochrane Metaanalizi)



Yüksek Doz Salmeterol/Flutikazon+ SABA tedavisi ile karşılaştırıldığında Budesonide/Formeterol idame+ kurtarıcı tedavisi **ağır alevlenme riskini %33 oranında azaltır.**

2014 yılında Astımda neler oldu



Inflammation, Metabolic Dysregulation, and Pulmonary Function among Obese Urban Adolescents with Asthma

Deepa Rastogi¹, Sasha Fraser¹, Jamie Oh¹, Ashley M. Huber¹, Yael Schulman¹, Renuka H. Bhagtani¹, Zeeshan S. Khan¹, Lydia Tesfa², Charles B. Hall³, and Fernando Macian⁴

Abstract

Rationale: Insulin resistance and low high-density lipoprotein (HDL) are associated with pulmonary morbidity, including asthma, but the underlying mechanisms are not well elucidated.

Objectives: To investigate whether systemic inflammation underlies the association of metabolic abnormalities with pulmonary function among urban adolescents.

Methods: Th-cell responses and monocyte subsets, and their association with serum homeostatic model assessment of insulin resistance (HOMA-IR) and HDL, and pulmonary function were quantified in 168 adolescents, including 42 obese subjects with asthma, 42 normal-weight subjects with asthma, 40 obese subjects without asthma, and 44 healthy control subjects. Th-cell responses (Th1 [CD4⁺IFN γ ⁺] and Th2 [CD4⁺IL4⁺] cells) to stimulation with phytohemagglutinin, leptin, and dust mite, and classical (CD14⁺CD16⁻), resident (CD14⁺CD16⁺), and patrolling (CD14dimCD16⁺) monocytes, and their C-C chemokine receptor type-2 (CCR2) expression were quantified by flow cytometry.

Measurements and Main Results: Th1/Th2 ratio to all three stimuli was higher in obese subjects with asthma than normal-weight subjects with asthma and directly correlated with HOMA-IR. Classical monocytes inversely associated with Th1/Th2 ratio to phytohemagglutinin ($r = -0.43$; $P = 0.01$) and directly with Asthma Control Test score ($\beta = 1.09$; $P = 0.04$), while patrolling monocytes correlated with Composite Asthma Severity Index score ($\beta = 1.11$; $P = 0.04$) only among obese subjects with asthma. HDL was inversely associated with patrolling monocytes and directly associated with CCR2 expression on resident monocytes. CCR2 expression on patrolling monocytes predicted residual volume (RV), RV/TLC ratio, and FRC, after adjusting for HDL, but not after adjusting for body mass index. Association of Th1/Th2 ratio with RV, FRC, and inspiratory capacity was attenuated after adjusting for HOMA-IR.

Conclusions: Th1 polarization and monocyte activation among obese subjects with asthma correlates with metabolic abnormalities. Association of monocyte activation with pulmonary function is mediated by body mass index, whereas that of Th1 polarization is mediated by insulin resistance.

Keywords: obesity; asthma; metabolic dysregulation; inflammation; pulmonary function

Oral Glucocorticoid-Sparing Effect of Mepolizumab in Eosinophilic Asthma

BACKGROUND

Many patients with severe asthma require regular treatment with oral glucocorticoids despite the use of high-dose inhaled therapy. However, the regular use of systemic glucocorticoids can result in serious and often irreversible adverse effects. Mepolizumab, a humanized monoclonal antibody that binds to and inactivates interleukin-5, has been shown to reduce asthma exacerbations in patients with severe eosinophilic asthma.

METHODS

In a randomized, double-blind trial involving 135 patients with severe eosinophilic asthma, we compared the glucocorticoid-sparing effect of mepolizumab (at a dose of 100 mg) with that of placebo administered subcutaneously every 4 weeks for 20 weeks. The primary outcome was the degree of reduction in the glucocorticoid dose (90 to 100% reduction, 75 to less than 90% reduction, 50 to less than 75% reduction, more than 0 to less than 50% reduction, or no decrease in oral glucocorticoid dose, a lack of asthma control during weeks 20 to 24, or withdrawal from treatment). Other outcomes included the rate of asthma exacerbations, asthma control, and safety.

RESULTS

The likelihood of a reduction in the glucocorticoid-dose stratum was 2.39 times greater in the mepolizumab group than in the placebo group (95% confidence interval, 1.25 to 4.56; $P=0.008$). The median percentage reduction from baseline in the glucocorticoid dose was 50% in the mepolizumab group, as compared with no reduction in the placebo group ($P=0.007$). Despite receiving a reduced glucocorticoid dose, patients in the mepolizumab group, as compared with those in the placebo group, had a relative reduction of 32% in the annualized rate of exacerbations (1.44 vs. 2.12, $P=0.04$) and a reduction of 0.52 points with respect to asthma symptoms ($P=0.004$), as measured on the Asthma Control Questionnaire 5 (in which the minimal clinically important difference is 0.5 points). The safety profile of mepolizumab was similar to that of placebo.

CONCLUSIONS

In patients requiring daily oral glucocorticoid therapy to maintain asthma control, mepolizumab had a significant glucocorticoid-sparing effect, reduced exacerbations, and improved control of asthma symptoms. (Funded by GlaxoSmithKline; SIRTUS ClinicalTrials.gov number, NCT01691508.)

Gene Expression in Relation to Exhaled Nitric Oxide Identifies Novel Asthma Phenotypes with Unique Biomolecular Pathways

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Abstract

Rationale: Although asthma is recognized as a heterogeneous disease associated with clinical phenotypes, the molecular basis of these phenotypes remains poorly understood. Although genomic studies have successfully broadened our understanding in diseases such as cancer, they have not been widely used in asthma studies.

Objectives: To link gene expression patterns to clinical asthma phenotypes.

Methods: We used a microarray platform to analyze bronchial airway epithelial cell gene expression in relation to the asthma biomarker fractional exhaled nitric oxide (F_{ENO}) in 155 subjects with asthma and healthy control subjects from the Severe Asthma Research Program (SARP).

Measurements and Main Results: We first identified a diverse set of 549 genes whose expression correlated with F_{ENO} . We used *k*-means to cluster the patient samples according to the expression

of these genes, identifying five asthma clusters/phenotypes with distinct clinical, physiological, cellular, and gene transcription characteristics—termed “subject clusters” (SCs). To then investigate differences in gene expression between SCs, a total of 1,384 genes were identified that highly differentiated the SCs at an unadjusted *P* value $< 10^{-6}$. Hierarchical clustering of these 1,384 genes identified nine gene clusters or “biclusters,” whose coexpression suggested biological characteristics unique to each SC. Although genes related to type 2 inflammation were present, novel pathways, including those related to neuronal function, WNT pathways, and actin cytoskeleton, were noted.

Conclusions: These findings show that bronchial epithelial cell gene expression, as related to the asthma biomarker F_{ENO} , can identify distinct asthma phenotypes, while also suggesting the presence of underlying novel gene pathways relevant to these phenotypes.

Keywords: exhaled nitric oxide; clustering; severe asthma

Effect of Vitamin D₃ on Asthma Treatment Failures in Adults With Symptomatic Asthma and Lower Vitamin D Levels:

The VIDA Randomized Clinical Trial

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INTERVENTIONS—Oral vitamin D₃ (100 000 IU once, then 4000 IU/d for 28 weeks; n = 201) or placebo (n = 207) was added to inhaled ciclesonide (320 µg/d). If asthma control was achieved after 12 weeks, ciclesonide was tapered to 160 µg/d for 8 weeks, then to 80 µg/d for 8 weeks if asthma control was maintained.

MAIN OUTCOMES AND MEASURES—The primary outcome was time to first asthma treatment failure (a composite outcome of decline in lung function and increases in use of β-agonists, systemic corticosteroids, and health care).

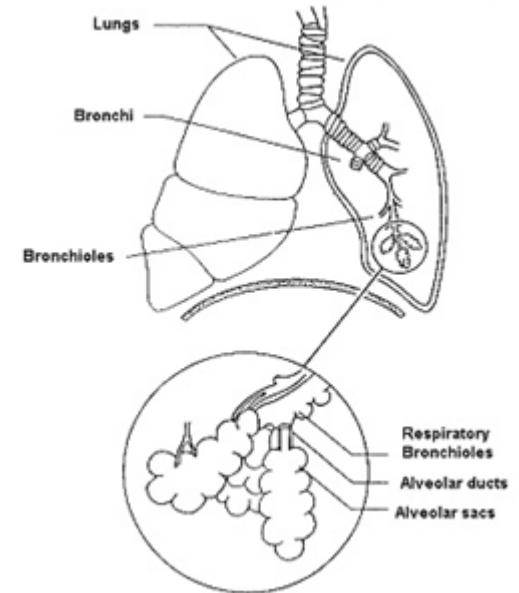
RESULTS—Treatment with vitamin D₃ did not alter the rate of first treatment failure during 28 weeks (28% [95% CI, 21%–34%] with vitamin D₃ vs 29% [95% CI, 23%–35%] with placebo; adjusted hazard ratio, 0.9 [95% CI, 0.6–1.3]). Of 14 prespecified secondary outcomes, 9 were analyzed, including asthma exacerbation; of those 9, the only statistically significant outcome was a small difference in the overall dose of ciclesonide required to maintain asthma control (111.3 µg/d [95% CI, 102.2–120.4 µg/d] in the vitamin D₃ group vs 126.2 µg/d [95% CI, 117.2–135.3 µg/d] in the placebo group; difference of 14.9 µg/d [95% CI, 2.1–27.7 µg/d]).

CONCLUSIONS AND RELEVANCE—Vitamin D₃ did not reduce the rate of first treatment failure or exacerbation in adults with persistent asthma and vitamin D insufficiency. These findings do not support a strategy of therapeutic vitamin D₃ supplementation in patients with symptomatic asthma.

Yaşlılarda Astım Tanı ve Tedavisi

Eur J Int Med 2014;25:336-42

- Yaşlılarda astım %6-10 sıklıkla görülür
- Semptomların yanlış algılanması
 - Sıklıkla yanlış tanı ve tedaviye neden oluyor
 - Astım/KOAH
 - KKY
- Sigara
- Sıklıkla >64y hastalarda karışıklık
- Allerjen duyarlılığı yaş ile azalır
 - Gece şikayetlerinde azalma
- Reversibilite
 - Her yaşta astımlı hastalarda tanı için önemlidir
 - Yaşlılarda yapılmalı
 - Yaş ile azalır (yapısal değişiklikler ve remodelling)
- DLCO ve RV ölçümleri ayırimda önemli olabilmektedir.
- Havayolu aşırı duyarlılığı (metakolin testi)
 - Yaşla cevap azalabilir
- Biyobelirteçler ??



TEŞEKKÜRLER

- İlaçların doğru ve düzgün bir şekilde uzun süreli olarak alınmasını sağlamazsanız hastalık düzelmez.

