



Antibiyotik Direncini Önlemek ! (Hastane Bakış Açısı)

Dr Gökhan AYGÜN
İÜC- CTF Tıbbi Mikrobiyoloji AD

Sunum

- Giriş
- Felsefe
- Yapılabilecekler
- Öneriler
- Sonuç



TIME
IN PARTNERSHIP WITH **CNN**

Thursday, Oct. 01, 2009

The Desperate Need for Antibiotics

By Eben Harrell / London

THE NEW YORKER

MEDICAL DISPATCH

SUPERBUGS

impossible to treat.

Drug-resistant bacteria kills thousands in U.S.

Study finds 85 percent of invasive infections linked to health-care centers

By Kevin Sack
New York Times

ATLANTA: Nearly 19,000 people died in the United States in 2005 after being infected with virulent drug-resistant bacteria that have spread rampantly through hospitals and nursing homes, according to the most thorough study of the disease's prevalence ever conducted.

The government study, which appears today in the Journal of the American Medical Association, suggests such

common as previously thought, according to its lead author, Dr. R. Monina Klevens.

If the mortality estimates are correct, the number of deaths associated with the germ, methicillin-resistant Staphylococcus aureus, or MRSA, would exceed those attributed to HIV-AIDS, Parkinson's disease, emphysema or homicide each year.

By extrapolating data collected in nine locations, the re-

94,360 patients developed an invasive infection from the pathogen in 2005 and that nearly one of every five, or 18,650 of them, died. The study points out that it is not always possible to determine whether a death is caused by MRSA or merely accelerated by it.

The authors, who work for the U.S. Centers for Disease Control and Prevention, cautioned that their methodology differed significantly from pre-



Doctors fear that dangerous bacteria may become

Enterobacter

Staphylococcus aureus

Klebsiella

Acinetobacter

Pseudomonas aeruginosa

Enterococcus

In recent years, efforts to combat hospital-acquired infections have neglected to invest in new antibiotics available to treat drug-resistant 'superbugs.'

Bacterial and parasitic antibiotic research related to deaths attributed to hospital-acquired drug-resistant 'superbugs.'

BBC NEWS

Home UK Africa Asia

16 November 2012 Last updated

Antibiotic resistance 'big threat to health'

COMMENTS (444)

Resistance to antibiotics is one of the greatest threats to modern health, say.

The warning from England's chief medical officer and the Health Protection Agency amid reports of growing problems with strains of bugs such as E. coli and

They said many antibiotics were being used unnecessarily for mild infections.

"Infectious disease physicians are all aware of the prospect that many antibiotics may not be available to treat patients in the near future. There simply are no new drugs in the pharmaceutical pipeline to keep pace with the growing number of resistant bacteria, so-called 'superbugs.'"

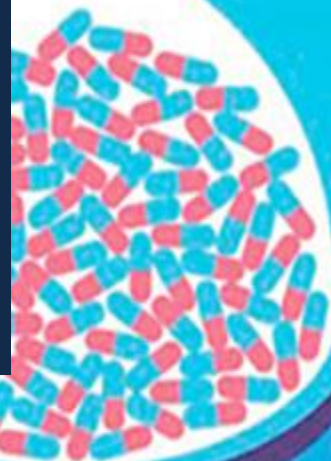
Joseph R. Dalovisio, MD
IDSA President

IDSA. Clin Infect Dis 2009;48 (1 January)

Newsweek

OCTOBER 18, 2013

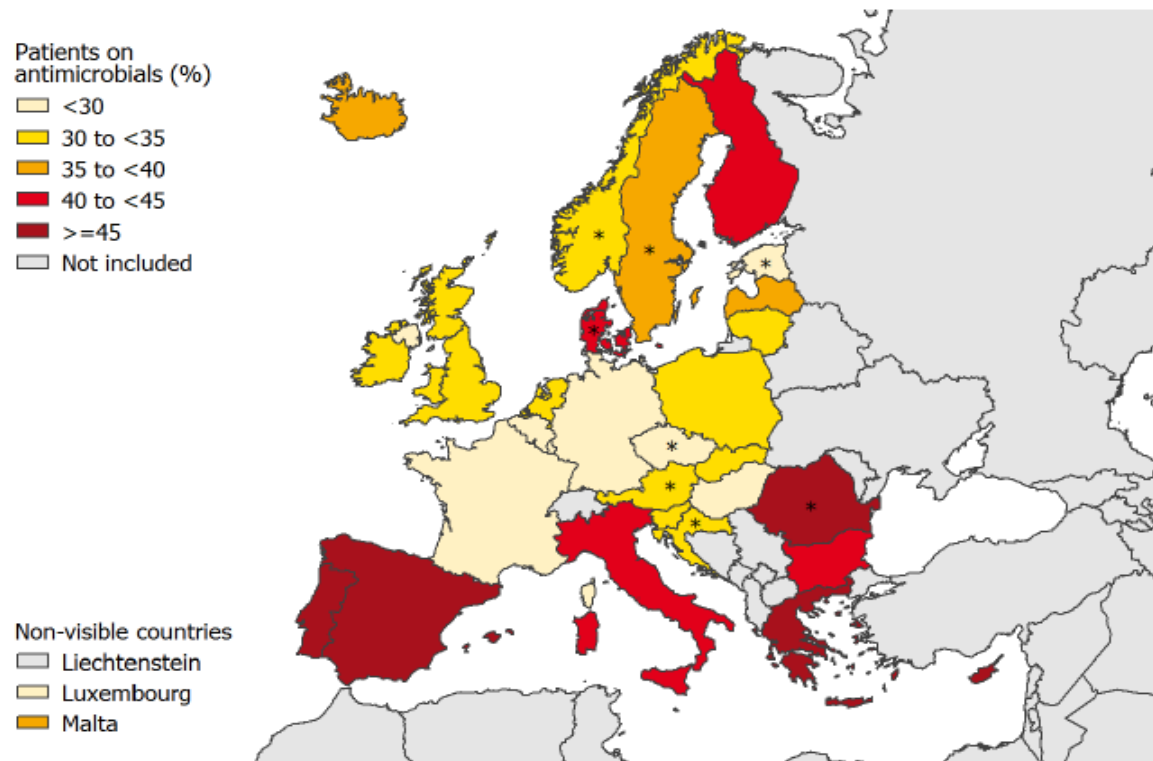
THE DRUGS DON'T WORK



Point prevalence survey of healthcare-associated infections and antimicrobial use in European acute care hospitals 2011–2012

www.ecdc.europa.eu

Figure 6. Prevalence of antimicrobial use (percentage of patients receiving antimicrobials) in acute care hospitals, ECDC PPS 2011–2012

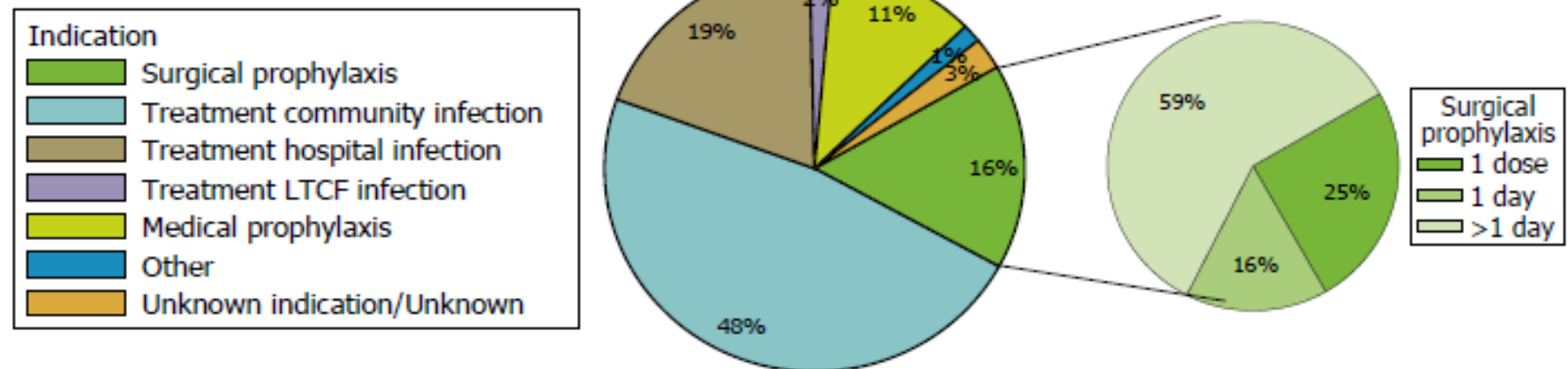


**PPS data representativeness was poor in Austria, Croatia, Czech Republic, Estonia, Norway and Romania and very poor in Denmark and Sweden.*

Point prevalence survey of healthcare-associated infections and antimicrobial use in European acute care hospitals 2011–2012

www.ecdc.europa.eu

Figure 5. Indications for antimicrobial use in European acute care hospitals, ECDC PPS 2011–2012



Cerrahpaşa Tıp Fakültesi, İç Hastalıkları ABD'nda Antibiyotik Kullanımı

- 1993 yılına ait ilk 1000 dosya
- Yatış süresince antibiyotik kullanımı : %19
- Antibiyotik kullanan olguların %25'inde ateş ve lökositoya rastlanmamıştır.
- Kültür-Antibiyogram istenme oranı : %42.2
- **Antibiyotik endikasyonu : %55**

Antibiyotik direncinin bedeli

- Maliyet artışı
- Hastanede daha uzun süre kalış
- Artmış mortalite

Clinical Infectious Diseases 2006; 42:S82-9

The Relationship between Antimicrobial Resistance and Patient Outcomes: Mortality, Length of Hospital Stay, and Health Care Costs

Sara E. Cosgrove

Division of Infectious Diseases, The Johns Hopkins Medical Institutions, Baltimore, Maryland

Sorun mikroorganizma ve mortalite artışı

Mortalite artışı = Uygunsuz antibiyotik

- * Daha az etkili seçenekler

- ** Daha toksik ilaçlar

- *** Uygun olmayan dozlar ($< \text{MİK}$)

- **** Gecikerek başlanması

- ***** Daha kötü hastalar

BAKTERİLER DAHA VİRÜLAN DEĞİL !???



Rapid emergence of colistin resistance and its impact on fatality among healthcare-associated infections

M. Aydın^{a,*}, Ö. Ergönül^b, A. Azap^c, H. Bilgin^d, G. Aydın^{c,e}, S.A. Çavuş^f, Y.Z. Demiroğlu^g, H.E. Alışkan^h, O. Memikoglu^c, Ş. Menekşeⁱ, Ş. Kaya^j, N.A. Demir^k, I. Karaoglan^l, S. Başaran^m, Ç. Hatipoğluⁿ, Ş. Erdinçⁿ, E. Yılmaz^o, A. Tümtürk^p, Y. Tezer^p, H. Demirkaya^q, Ş.E. Çakar^r, Ş. Keske^b, S. Tekin^b, C. Yardımcı^s, Ç. Karakoç^t, P. Ergen^u, Ö. Azap^q, L. Mülazımoğlu^d, O. Ural^k, F. Can^v, H. Akalın^o, Turkish Society of Clinical Microbiology and Infectious Diseases, Healthcare-related Infections Study Group, Turkey

S U M M A R Y

This article describes the emergence of resistance and predictors of fatality for 1556 cases of healthcare-associated Gram-negative bloodstream infection in 2014 and 2015. The colistin resistance rate in *Klebsiella pneumoniae* was 16.1%, compared with 6% in 2013. In total, 660 (42.4%) cases were fatal. The highest fatality rate was among patients with *Acinetobacter baumannii* bacteraemia (58%), followed by *Pseudomonas aeruginosa* (45%), *Klebsiella pneumoniae* (41%), *Enterobacter cloacae* (32%) and *Escherichia coli* (28%). On multi-variate analysis, the minimum inhibitory concentrations for carbapenems [odds ratio (OR) 1.02, 95% confidence interval (CI) 1.01–1.04; $P = 0.002$] and colistin (OR 1.1, 95% CI 1.03–1.17; $P = 0.001$) were found to be significantly associated with fatality.

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Antibiyotik Direncinin Bedeli (Çevre)

Trends in Microbiology

CellPress
REVIEWS

Review

Antibiotic-Resistance Genes in Waste Water

Antti Karkman,^{1,2,3} Thi Thuy Do,⁴
Marko P.J. Virta^{5,*}

Selection and Transfer of Antibiotic Resistance in Waste Water

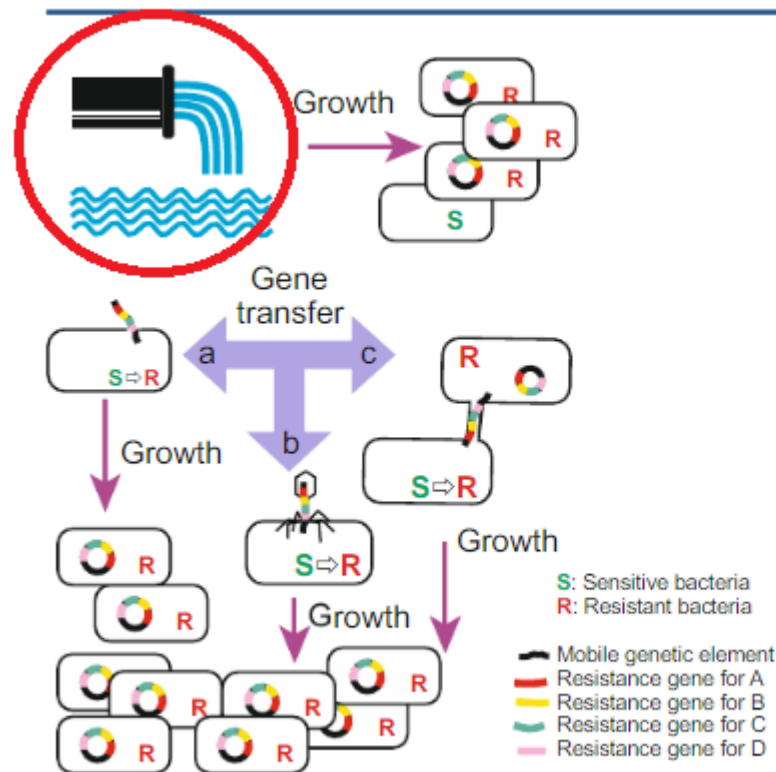


Figure 1. When there is selection pressure for antibiotic-resistant bacteria (ARB) (R), they overgrow the sensitive bacteria (S). The sensitive bacteria can become resistant by acquiring a resistance gene by transformation (a), transduction (b), or conjugation (c). Selection pressure can be caused by antibiotics, metals, or biocides present in the waste water. Selection pressure against one resistance gene can select other resistance genes also by coselection, as indicated by different resistance genes.

Antibiyotik direnci-felsefe

- **Antibiyotik baskısı dirençli mikroorganizmaları seçer !**
- **Dirençli bakteriler virulans ve «fitness» özelliklerinden kaybeder ?**
- **Antibiyotik kullanımı sonlanınca duyarlı bakteriler yeniden baskın hale gelir, dirençliler ortadan kalkar ?**
- **Antibiyotik kullanımı azalınca o antibiyotiğe direnç azalır ?**

Antibiotik kullanımı ve direnç ?

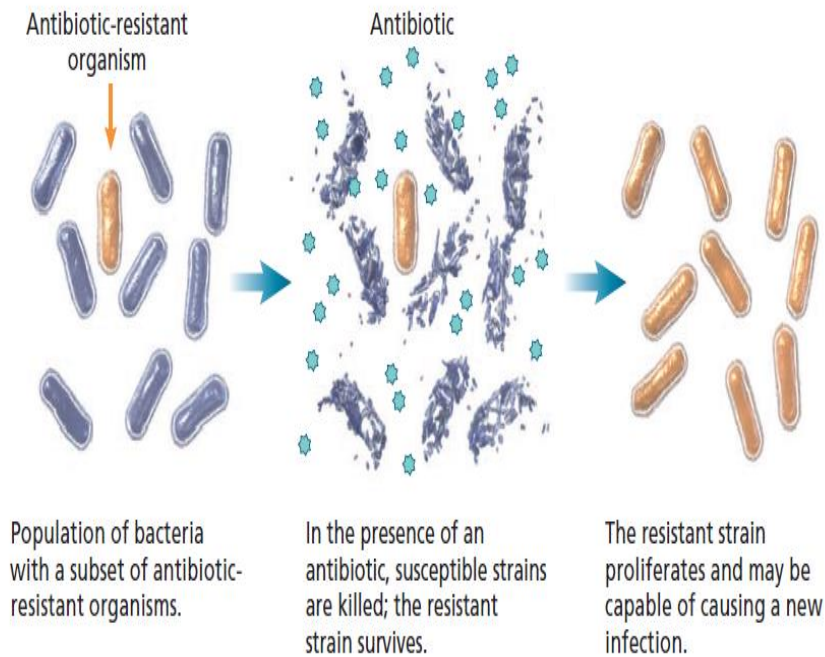
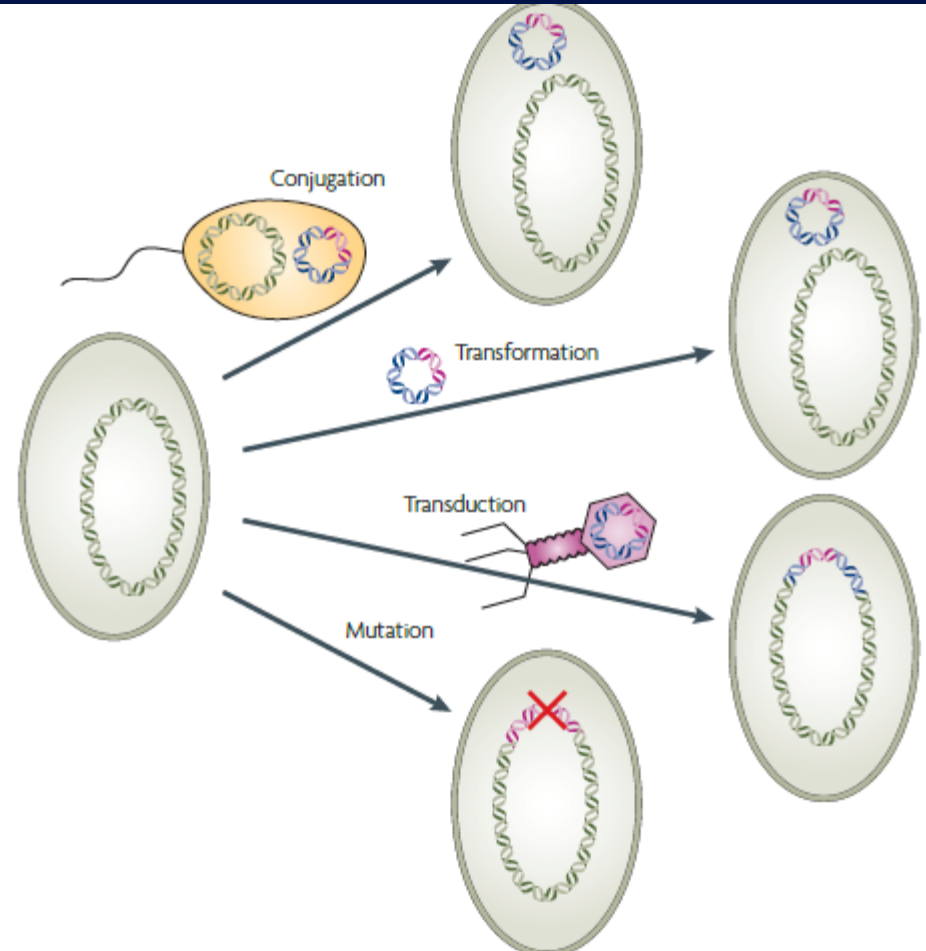


Figure 2: Effect of selective antibiotic pressure in bacteria.



Direnç-Mikroorganizma kinetiği

Antibiotic resistance and its cost: is it possible to reverse resistance?

Dan I. Andersson* and Diarmaid Hughes†

Abstract | Most antibiotic resistance mechanisms are associated with a fitness cost that is typically observed as a reduced bacterial growth rate. The magnitude of this cost is the main biological parameter that influences the rate of development of resistance, the stability of the resistance and the rate at which the resistance might decrease if antibiotic use were reduced. These findings suggest that the fitness costs of resistance will allow susceptible bacteria to outcompete resistant bacteria if the selective pressure from antibiotics is reduced. Unfortunately, the available data suggest that the rate of reversibility will be slow at the community level. Here, we review the factors that influence the fitness costs of antibiotic resistance, the ways by which bacteria can reduce these costs and the possibility of exploiting them.

Table 1 | The biological cost of antibiotic resistance conferred by chromosomal mutations

Bacteria	Resistance	Cost*	Assay system	Refs
<i>Salmonella enterica</i> subsp. <i>enterica</i> serovar Typhimurium	Streptomycin	Variable	Mice and <i>in vitro</i>	29,31,88,91
	Rifampicin	Variable	Mice and <i>in vitro</i>	29,49
	Nalidixic acid	Yes	Mice and <i>in vitro</i>	29
	Ciprofloxacin	Yes	Chickens and <i>in vitro</i>	124
	Fusidic acid	Variable	Mice and <i>in vitro</i>	40–42,92
	Mupirocin	Yes	Mice, nematodes and <i>in vitro</i>	125
<i>Escherichia coli</i>	Actinonin	Yes	Mice, nematodes and <i>in vitro</i>	96
	Streptomycin	Variable	<i>In vitro</i>	126,127
	Norfloxacin	Variable	Mice and <i>in vitro</i>	58
	Rifampicin	Variable	<i>In vitro</i>	46
<i>Campylobacter jejuni</i>	Fosfomycin	Yes	Urine and <i>in vitro</i>	128
	Ciprofloxacin	Variable	Chickens	34
<i>Mycobacterium tuberculosis</i>	Isoniazid	Yes	Mice	73,99
	Rifampicin	Yes	Macrophages and <i>in vitro</i>	26,129,130
<i>Mycobacterium bovis</i>	Isoniazid	Yes	Mice	72
<i>Mycobacterium smegmatis</i>	Streptomycin	Variable	<i>In vitro</i>	30
<i>Staphylococcus aureus</i>	Fusidic acid	Variable	Rats and <i>in vitro</i>	39,131,132
	Rifampicin	Variable	Biofilms and <i>in vitro</i>	45,47,133
	Mupirocin	No	Mice and <i>in vitro</i>	33,134
	Methicillin	Yes	<i>In vitro</i>	32
	Vancomycin	Variable	<i>In vitro</i>	57

Antimicrobial Resistance of Hypervirulent *Klebsiella pneumoniae*: Epidemiology, Hypervirulence-Associated Determinants, and Resistance Mechanisms

Chang-Ro Lee,^{1,†} Jung Hun Lee,^{1,†} Kwang Seung Park,^{1,†} Jeong Ho Jeon,¹ Young Bae Kim,² Chang-Jun Cha,³ Byeong Chul Jeong,¹ and Sang Hee Lee^{1,*}

[Author information](#) ► [Article notes](#) ► [Copyright and License information](#) ►

This article has been [cited by](#) other articles in PMC.

Abstract

Klebsiella pneumoniae is one of the most clinically relevant responsible for community-acquired and nosocomial infections, bacteremias, and liver abscesses. Since the emergence of the hypervirulent phenotype, has been associated with the hypermucoviscosity phenotype, has been responsible for serious disseminated infections, such as pyogenic endophthalmitis, in a generally younger and healthier population. Hypervirulent *K. pneumoniae* were primarily found in East Asia and now are increasingly spreading worldwide. Hypervirulent *K. pneumoniae* isolates are antibiotic-susceptible, some isolates with combined virulence and resistance, such as the carbapenem-resistant hypervirulent *K. pneumoniae* isolates, are increasingly being detected. The combination of multidrug resistance and enhanced virulence has the potential to cause the next clinical crisis. To better understand the basic biology of hypervirulent *K. pneumoniae*, this review will provide a summarization and discussion focused on epidemiology, hypervirulence-associated factors, and antibiotic resistance mechanisms of such hypervirulent strains. Epidemiological analysis of recent clinical

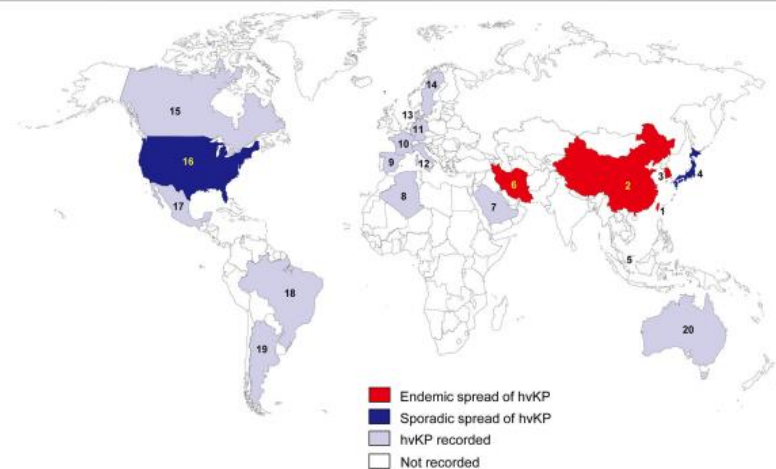


FIGURE 1 | Epidemiological features of hvKP. The endemic spread of hvKP means that multiple outbreaks of hvKP were reported in an indicated region. The sporadic spread of hvKP means that only case studies (no outbreak) were reported in an indicated region. 1, Taiwan; 2, China; 3, South Korea; 4, Japan; 5, Singapore; 6, Iran; 7, Saudi Arabia; 8, Algeria; 9, Spain; 10, France; 11, Germany; 12, Italy; 13, Denmark; 14, Sweden; 15, Canada; 16, United States; 17, Mexico; 18, Brazil; 19, Argentina; 20, Australia.

Sorun Mikroorganizma Dinamiği

	Kontamine SÇ elleriyle hastadan hastaya bulaşma	Kontamine SÇ elleriyle çevreden hastaya bulaşma	Kolonize SÇ hastaya bulaşma	Havayoluyla bulaşma	AB baskısıyla endojen seçilme
MRSA	+++	+ / ++	+	+ / -	+
VRE	+++	++	-	-	++
GSBL (+)	+++	+	-	-	+++
IMP-R <u>P.aeruginosa</u>	+	+	+	-	+++
IMP-R <u>A.baumannii</u>	+++	+++	-	- ★	++

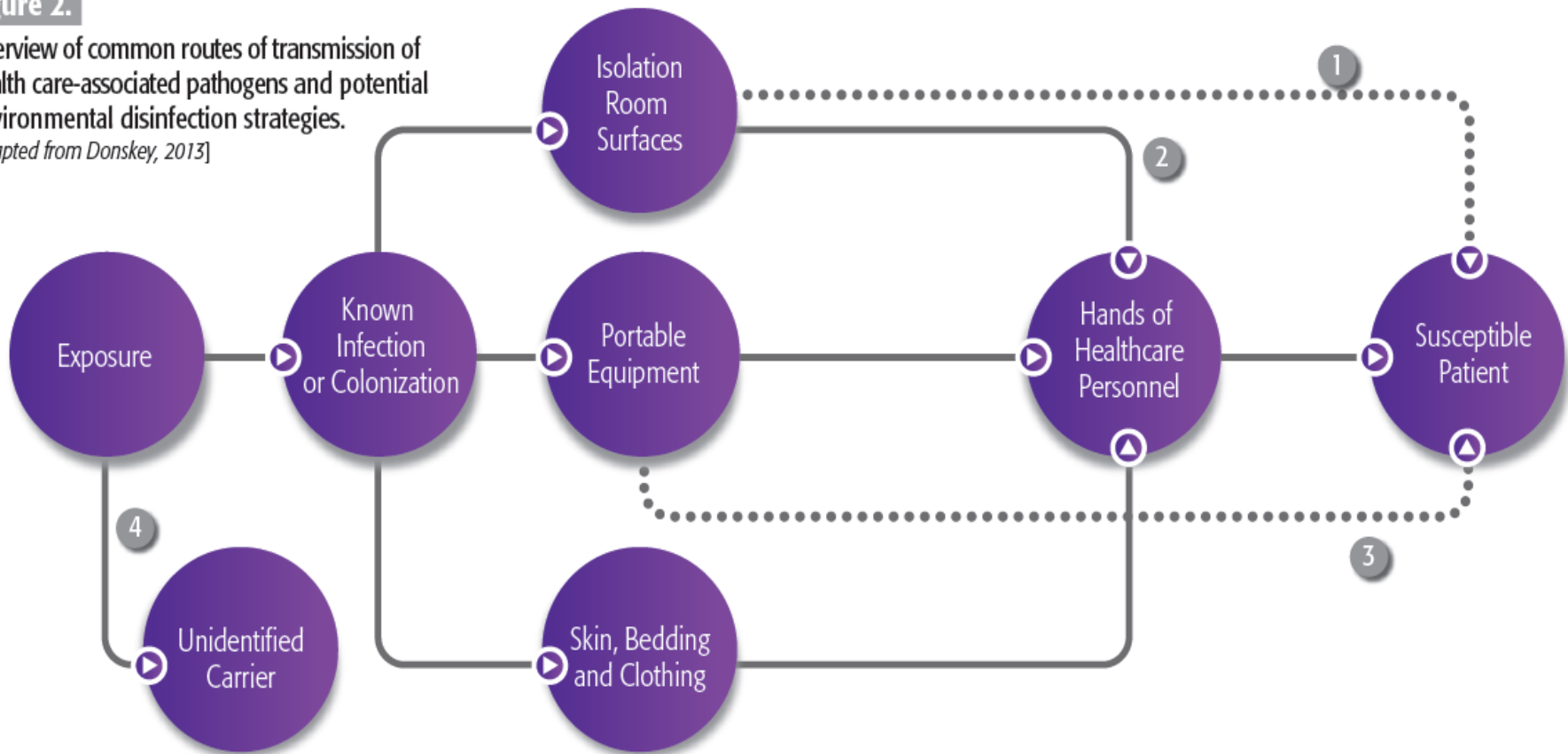
Hastane İnfeksiyonu Dinamiği

C.J. Donskey / American Journal of Infection Control 41 (2013) S12-S19

Figure 2.

Overview of common routes of transmission of health care-associated pathogens and potential environmental disinfection strategies.

[Adapted from Donskey, 2013]



Antibiotic Usage and Risk of Colonization and Infection with Antibiotic-Resistant Bacteria: a Hospital Population-Based Study[∇]

Evelina Tacconelli,^{1*} Giulia De Angelis,¹ Maria Adriana Cataldo,¹ Elisabetta Mantengoli,² Teresa Spanu,¹ Angelo Pan,³ Giampaolo Corti,⁴ Anna Radice,⁵ Lucia Stolzoli,² Spinello Antinori,⁵ Franco Paradisi,⁴ Giampiero Carosi,³ Roberto Bernabei,¹ Massimo Antonelli,¹ Giovanni Fadda,¹ Gian Maria Rossolini,² and Roberto Cauda¹

- 12 ay çok-merkezli, kohort
- MRSA, VRE, CR-PA
- Burun, rektal kolonizasyon
- Etkenlerle klonal ilişki (PFGE)
- Kolonizasyon ?
- Kolonizasyonda AB rolü, riskler
- Kolonizasyon- etken ?

Antibiotic Usage and Risk of Colonization and Infection with Antibiotic-Resistant Bacteria: a Hospital Population-Based Study[∇]

Evelina Tacconelli,^{1*} Giulia De Angelis,¹ Maria Adriana Cataldo,¹ Elisabetta Mantengoli,² Teresa Spanu,¹ Angelo Pan,³ Giampaolo Corti,⁴ Anna Radice,⁵ Lucia Stolzoli,² Spinello Antinori,⁵ Franco Paradisi,⁴ Giampiero Carosi,³ Roberto Bernabei,¹ Massimo Antonelli,¹ Giovanni Fadda,¹ Gian Maria Rossolini,² and Roberto Cauda¹

- 864 olgu
- Kolonizasyon MRSA %3, VRE %2, CR-PA %1
- 1000 AB günü başına dirençli bakteri kazanımı: Karbapenem 14, Glikopeptid 9, Sef-kinolon 6
- 30 gün içinde inf. gelişme oranı : % 9
- Risk Faktörleri :
 - Karbapenem kullanmak
 - > 70 yaş, HIV
 - > 16 gün hastane kalışı

RESEARCH ARTICLE

The impact of antibiotic use on transmission of resistant bacteria in hospitals: Insights from an agent-based model

Jonatan Almagor^{1,2*}, Elizabeth Temkin², Itzhak Benenson¹, Noga Fallach², Yehuda Carmeli^{2,3}, on behalf of the DRIVE-AB consortium[†]

Antibiyotik kullanımı iki şekilde dirençli bakteri kazanımını kolaylaştırır !

1- Dirençli bakterileri seçerek bu kişilerin bulaştırıcılığını arttırır !

*** 3.5-5.3 kat**

**** Antibiyotik kullanmayan kolonize hastada oda kontaminasyonu % 80 daha az**

2-Normal florayı bozarak dirençli bakterilerin yerleşimini kolaylaştırır !

***2-9 kat (AB ve etkene göre değişen oranlarda)**

RESEARCH ARTICLE

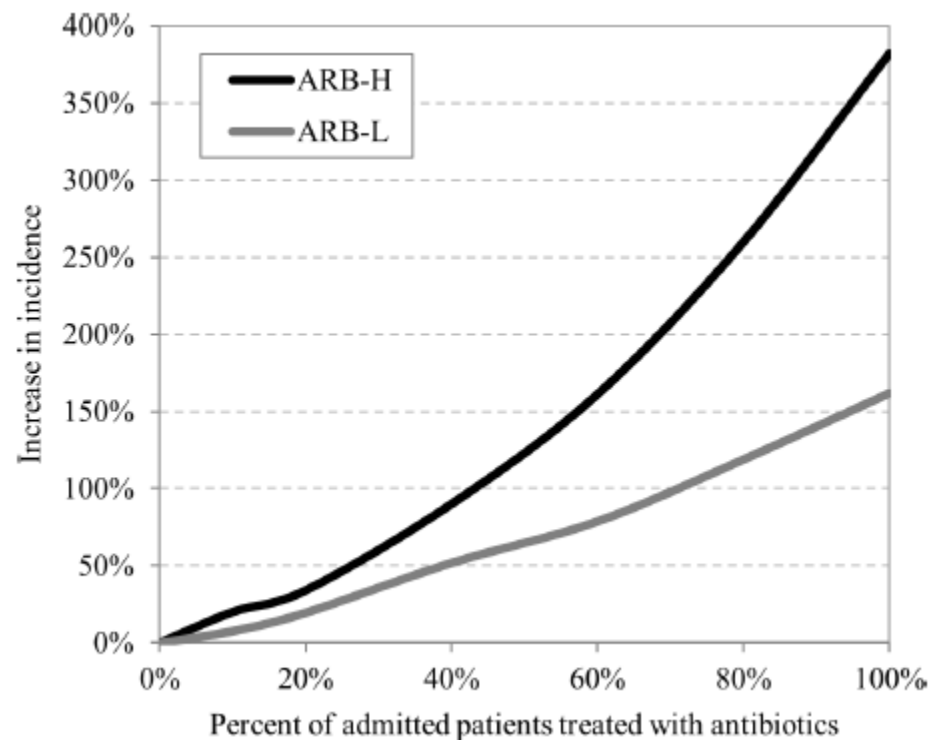
The impact of antibiotic use on transmission of resistant bacteria in hospitals: Insights from an agent-based model

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Table 2. Baseline transmission probabilities, by ARB strain.

Transmission probabilities	ARB-L	ARB-H	Values cited in the literature	Source
β_H —Contamination of a HCW from a colonized patient, per contact	5%	10%	6%–40%	[39–44]
β_P —Transmission from a contaminated HCW to a susceptible patient, per contact	2.5%	5%	6%–20%	[23, 39–41]
α —Transmission from a colonized patient to a susceptible adjacent patient, per day	0.5%	1%	1%–3%	[45–47]

<https://doi.org/10.1371/journal.pone.0197111.t002>



Tedavide seçenekler ve direnç

	KAR	TZP	SEF	Kolistin	Tigesiklin
Antips	+	++	+	++	-
Anti Ab	++	-	+	++	++
ESBL	+++	+	+	+++	+++
İBL	++	-	+	++ !	++
Total Dirence etki	+++	-/+	+++	+	+/-?
 Kinolon !!!					

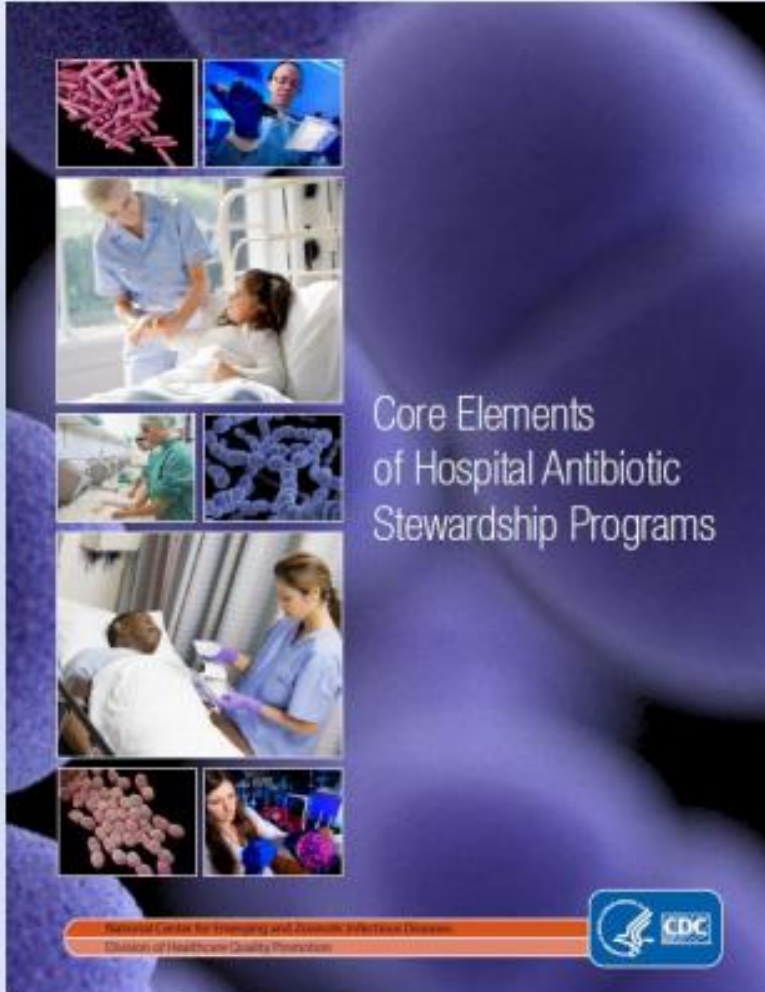
Ne yapalım ?

- **ANTİMİKROBİYAL YÖNETİM**
Antibiyotiklerin en etkin şekilde kullanılmasını sağlamak

Direnç konusundaki alt başlıklar:

- Antibiyotik kullanımını azalt !
- Dirençli bakterilerin yayılımını önle !
- **Dirençli bakteri dinamiğini daha iyi anla !**
- **Direnç genlerini ortadan kaldır! (gelecek?)**

Hastane Antibiyotik Yönetim Programının Temel Öğeleri



- Yönetici kararlılığı
- Hesap verebilirlik
- Antibiyotik bilgisi
- Eylemde bulunma
- Direnç eğilimlerinin izlenmesi
- Bildirimde bulunma
- Eğitim verme

Akılcı antibiyotik tedavisi?

- Antibiyotik verme !!!
 - *Riskleri ortadan kaldırmaya çalış !
 - **İnfeksiyon dışı olasılıkları hatırla
 - ***Kolonizasyonu tedavi etme
 - **** Koruyucu önlemler (AŞI,...)
- Uygun ampirik tedavi !
- Tedavi sürecini etkin hale getir (Doz, FK/FD)
- Antibiyotikleri –zamanında- kes !
- Laboratuvar verilerini dikkatle izle !

Sorun mikroorganizmalar için risk

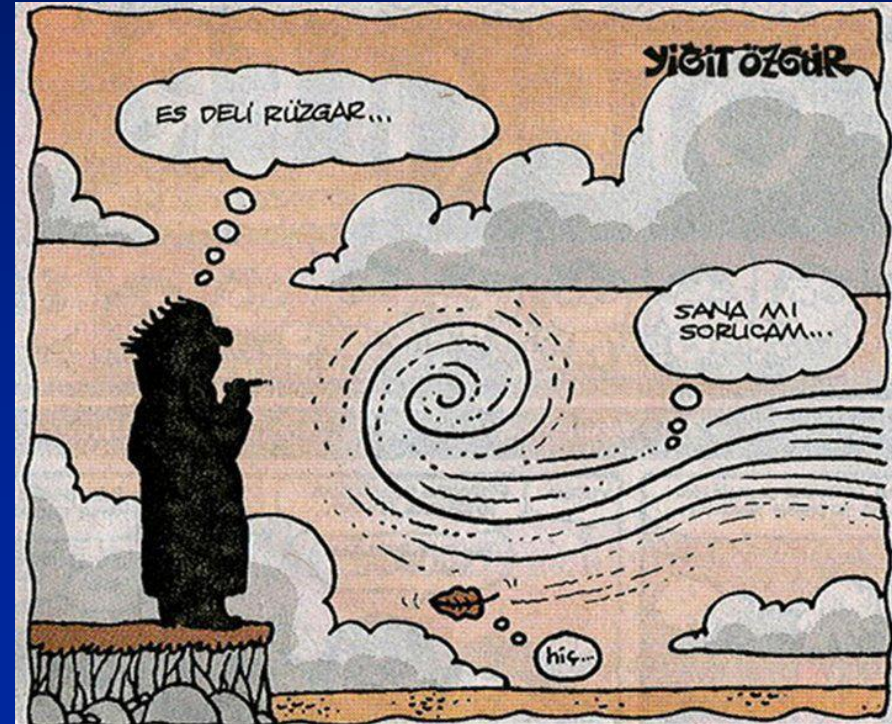
- **Kötü Hastalıklar**
- **İnvaziv Girişimler**
- **Ünitede sorun mikroorganizma varlığı**
- **YBÜ**
- **ANTİBİYOTİK**
- **Başka kurumlar !**

Riskleri ortadan kaldıralım !

- İnvaziv girişimleri ortadan kaldır
- YBÜ'nden çıkar
- YBÜ yatışlarında endikasyon !
- Personeli yeterli üniteler
-

Antibiyotik verme !

- Bir test yapalım ve bakteriyel infeksiyon olasılığını dışlayalım !
- Prokalsitonin ???
- Moleküler testler ?
- Belki gelecekte

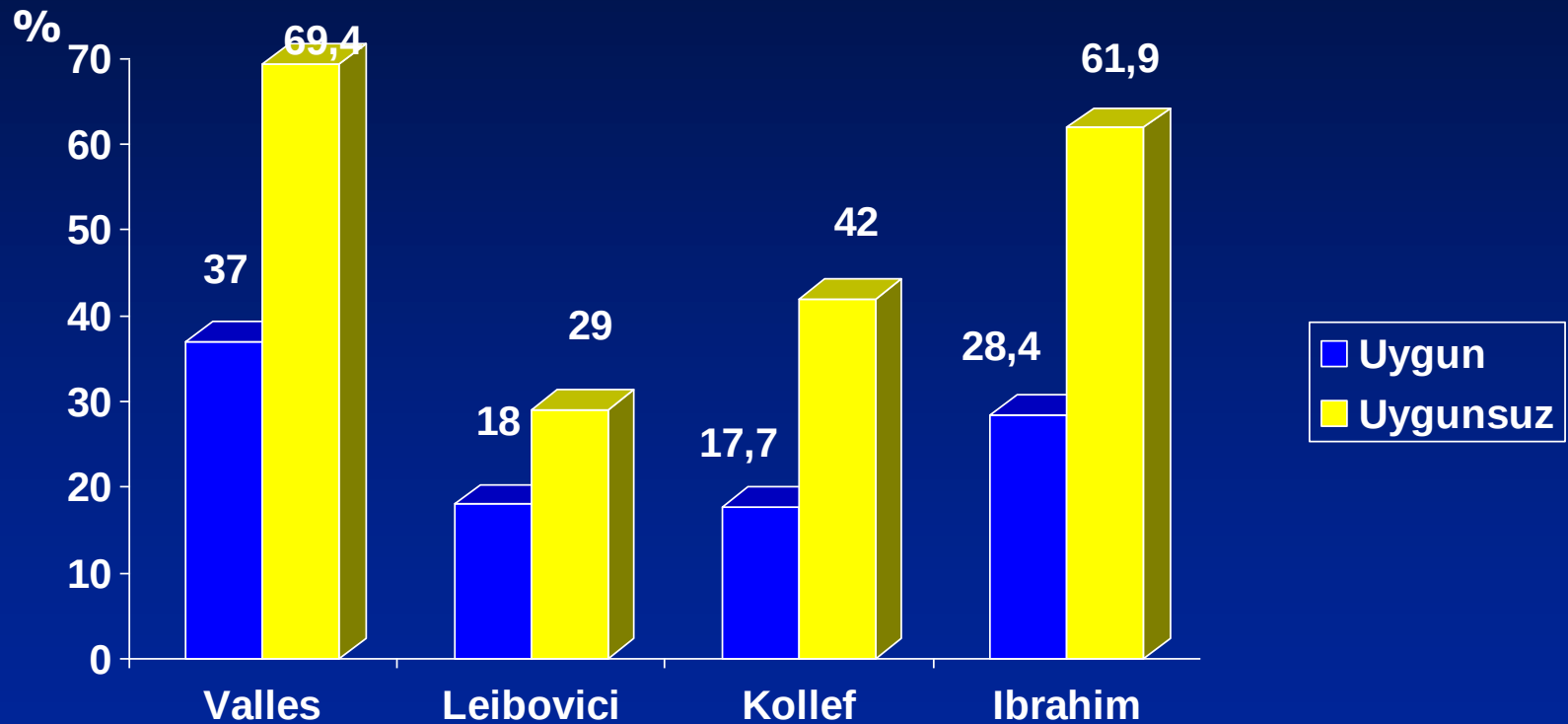


Ampirik tedavi !

- “Kültür”lü bir dayanağı olan
- Tamamen lokal verilere dayanan
- Riskleri dikkate alan
- Dinamik
- Sıkı işbirliği içinde uygulanan
- “Erken“ başlanan tedavi

uygun ampirik tedavidir!!

Uygunsuz Antibiyotik Kullanımı (Mortalite)



Leibovici L, et al. J Intern Med 1998;244:379-386
Ibrahim EH, et al, Chest 2000;118:146-155
Valles J, et al. Chest 2003;123:1615-1624
Kollef M, et al. Chest 1999;115:462-74

Ampirik tedavi-Rehberler

- Bilimsel verilerle kurgulanan
- Tamamen lokal verilerle oluşturulan
- Dinamik
- Sıkı işbirliği içinde oluşturulan

De-eskelasyon

- Başlanan tedaviyi klinik ve laboratuvar verileri ile yeniden düzenlemek
- Rasyonalize etmek
- Spektrumu daraltmak-genişletmek
- Hızlı tanı testleri ile de-eskelasyon ?



Reducing Antibiotic Use in the ICU: A Time-Based Approach to Rational Antimicrobial Use

P. O. Depuydt, L. De Bus, and J. J. De Waele

Day 0 - Initiation of therapy

- Restrictive empirical therapy tailored to the patient
- Withhold antibiotic therapy when infection likelihood is low
- Careful documentation in patient chart

Day 1 - Early reevaluation

- Identify non-infectious causes and discontinue antibiotics in absence of infection
- Early microbiology tests to fine-tune therapy

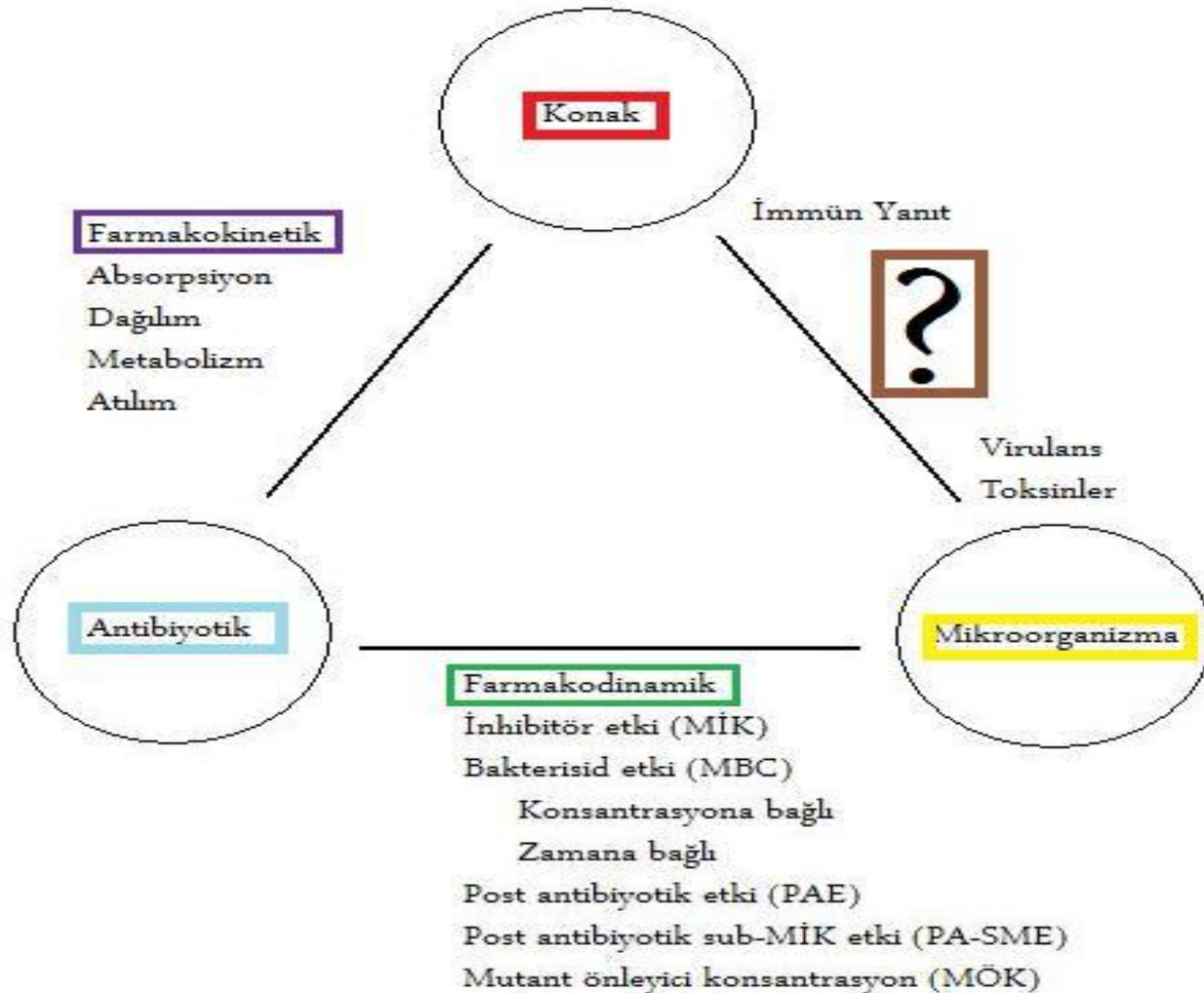
Day 3 - Microbiological turnaround

- Confirm susceptibility to antibiotics
- Deescalate when data available

From Day 5 onwards - End of therapy

- Limit treatment duration to 5-7 days for most infections
- Use biomarkers to guide therapy

Fig. 1 Opportunities for stewardship during antibiotic decision-making in the ICU



Farmakoloji/Klinik Eczacı ve Antibiyotik Kullanımı

Antibiyotik düzeyleri (AG, Van,...)

İlaç dozlarının düzenlenmesi

İlaç etkileşimleri

Farmakovijilans

**Karmaşık hastalarda tedavi
(HIV, YBÜ, kemoterapi,...)**

Kişiye özel tedavi ?

Antimikrobiyal tedaviyi kes(ebil) !!!

- **Odak kontrolü !!!**
- **Rehberler**
- **Prokalsitonin rehberliği**

- **VAP (7 gün !)**
- **Karın içi sepsis (1-5 gün)**

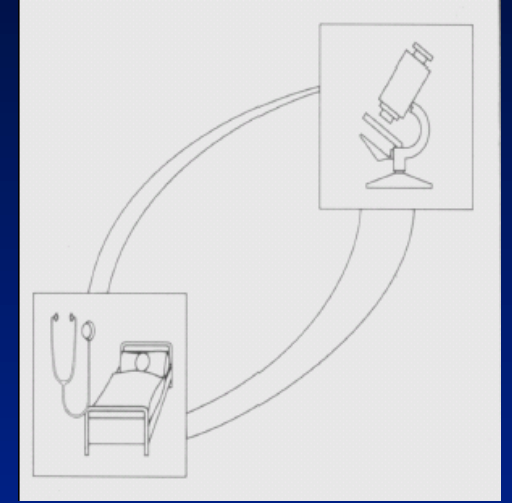
Mikrobiyoloji Laboratuvarı

- **Kültür kültürü oluşturmak**
- **Kültürlerin doğru alınmasını sağlamak**
- **Kontaminasyonları izlemek-düzeltilmek**
- **Uygun iletişim ortamı yaratmak (LIS)**
-

Mikrobiyoloji Laboratuvarı

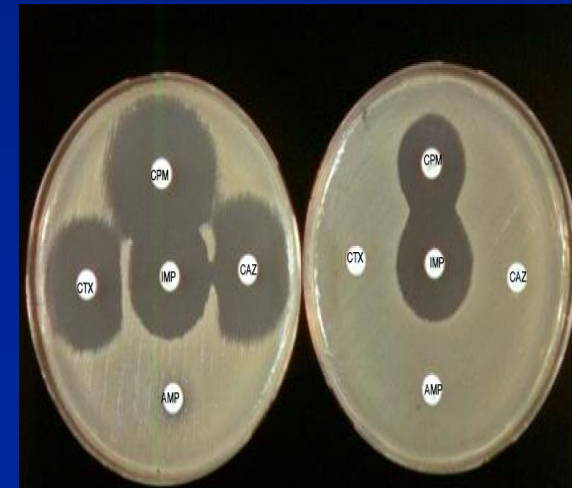
Acil Gram !

Moleküler hızlı tanı



Hızlı cins düzeyinde tanım

Standart antibiyotik duyarlılığı



Enterobacter cloacae

Mikrobiyoloji Laboratuvarı

- **Kümülatif antibiyogram !!!**
Servis/örnek bazında
Lokal verileri oluşturarak
- **Kısıtlı /yorumlu antibiyogram**

Antibiyotikleri izle

- Antibiyotik sürveyansı !
- Sadece saymak (DDD,...) dışında bu verileri izlemek ve yorumlamak.

Antibiyotik kullanımı-Hemşireler

- Hasta ile en çok temas edenler
- Sağlık Hizmetinin tüm aşamalarında yer alırlar
- Sağlık hizmeti iletişiminin merkezindeler
- Kurum kültürüne en sahip çalışanlar
- Hastane dışında toplumdaki sağlık hizmeti sunumunda da (bakım evi, terminal bakım, evde bakım,...) yer alırlar

Clinical Infectious Diseases

INVITED ARTICLE

CLINICAL PRACTICE: Ellie J. C. Goldstein, Section Editor



The Critical Role of the Staff Nurse in Antimicrobial Stewardship—Unrecognized, but Already There

Richard N. Olans,¹ Rita D. Olans,² and Alfred DeMaria Jr³

Hastaları dahil eden bir yaklaşım



Australian Government

Antibiotic resistance occurs when bacteria change to protect themselves from an antibiotic. The more we use antibiotics, the more chance bacteria have to become resistant to them.



What health professionals can do:



- 1 Consider any safe alternatives to an immediate antibiotic prescription



- 2 Prescribe in accordance with therapeutic guidelines, and where possible use diagnostics to inform treatment decisions



- 3 Talk to patients about the importance of appropriate antibiotic use and the dangers of antibiotic resistance



- 4 Give patients advice on how to manage symptoms without antibiotics



- 5 Apply best practice infection prevention and control



- 6 Talk to patients about how to prevent infections and their spread (e.g. vaccination, good hygiene and hand washing)

Öneriler !



Step-by-step approach for development and implementation of hospital antibiotic policy and standard treatment guidelines



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Öneriler!

- Cerrahi Profilaksi ilk adım olarak uygun hedef olabilir !

Cerrahi Profilaksi Nokta Prevalans Çalışması (03-04 Nisan 2017) Sonuç Raporu

HASTANE GENELİ	% 48,25	%52,8	2015 TARİHLİ CTF CERRAHİ PROFİLAKSİ PROTOKOLÜ SONRASI CERRAHİ PROFİLAKSİ UYUMU; ORTOPEDİ, ÜROLOJİ, K. DOĞUM, ÇOCUK CERRAHİSİ VE KBB'DE ARTMIŞTIR GÖĞÜS CERRAHİSİ, NRŞ, GENEL CERRAHİ, PRC VE GÖZ KLİNİĞİNDE AZALMIŞTIR UYGUNLUK 2011'E GÖRE TOPLAMDA %4,5 ARTMIŞTIR
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**Cochrane
Library**

Cochrane Database of Systematic Reviews

Interventions to improve antibiotic prescribing practices for hospital inpatients (Review)

Davey P, Marwick CA, Scott CL, Charani E, McNeil K, Brown E, Gould IM, Ramsay CR, Michie S

Authors' conclusions

We found high-certainty evidence that interventions are effective in increasing compliance with antibiotic policy and reducing duration of antibiotic treatment. Lower use of antibiotics probably does not increase mortality and likely reduces length of stay. Additional trials comparing antibiotic stewardship with no intervention are unlikely to change our conclusions. Enablement consistently increased the effect of interventions, including those with a restrictive component. Although feedback further increased intervention effect, it was used in only a minority of enabling interventions. Interventions were successful in safely reducing unnecessary antibiotic use in hospitals, despite the fact that the majority did not use the most effective behaviour change techniques. Consequently, effective dissemination of our findings could have considerable health service and policy impact. Future research should instead focus on targeting treatment and assessing other measures of patient safety, assess different stewardship interventions, and explore the barriers and facilitators to implementation. More research is required on unintended consequences of restrictive interventions.

Sorunlu mikroorganizmalarla mücadele

Hastane enfeksiyonları kısır döngüsünü nasıl kıracağız?



Yeni antibiyotiklerle direnç sorununun üstesinden gelmek mümkün değil



Tek Çözüm

Başarılı Enfeksiyon Kontrol Programları

El Hijyeni
Standart Önlemler ve İzolasyonlar
Enfeksiyon Kontrol Kılavuzları
Kontrollü Antibiyotik Kullanımı

Hastane İnfeksiyonları ile mücadele...



SONUÇ



- Yakın gelecekte yeni antibiyotik beklenmiyor
- Etkin AMY uygulamaları
- Antibiyotik tedavileri konusunda geniş kapsamlı bir yaklaşım (hasta, hemşire, farmakolog/ klinik eczacı,...)
- Direnç kinetiğini daha iyi anlamak!

SONUÇ



- İyi hastane hastane infeksiyonlarını önlemek için en çok uğraşan hastanedir
- İyi sağlık sistemi önleyici yaklaşımları en öncelikli olarak gören, önlemek için yapılanlara katkı sağlayan sistemdir.
- İnfeksiyon Hastalıkları Uzmanları ve diğer branşların “Tedavi” yerine “Önleyici” bir bakış açısına yoğunlaşmalarına ihtiyaç vardır.

SORUN BAKTERİLERLE MÜCADELE ELİMİZDEDİR

