

Antibiotikaresistenz durch akute Atemwegsinfektionen

KFN-Pressekonferenz am 7.12.2016



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At UN, global leaders commit to act on antimicrobial resistance

Collective effort to address a challenge to health, food security, and development

Joint News release OPGA/WHO/FAO/OIE

21 SEPTEMBER 2016 | NEW YORK - World leaders today signalled an unprecedented level of attention to curb the spread of infections that are resistant to antimicrobial medicines.

Antimicrobial resistance (AMR) happens when bacteria, viruses, parasites, and fungi develop resistance against medicines that were previously able to cure them.

For the first time, Heads of State committed to taking a broad, coordinated approach to address the root causes of AMR across multiple sectors, especially human health, animal health and agriculture. This is only the fourth time a health issue has been

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NEWS

EU to launch new antimicrobial resistance action plan

Rory Watson

Brussels

The European Commission is putting the finishing touches on a new five year antimicrobial resistance (AMR) action plan, which will be launched next year.

Confirmation that the various EU supported activities to tackle AMR would continue after the current plans expire at the end of the year coincided with the publication of new data by the European Centre for Disease Prevention and Control (ECDC).¹

The data showed that, in 2015, antibiotic resistance continued to increase for most bacteria and antibiotics that the agency keeps under surveillance. In particular, carbapenem resistance in *Klebsiella pneumoniae* increased from 6.2% in 2012 to 8.1% in 2015. There were also reports of combined resistance to carbapenems and polymyxins, which are used as last line antibiotics.

The EU would also help finance research into new antimicrobial drugs and the development of rapid diagnostic tests, vaccines, and alternatives to antibiotics.

The final area of EU support would see it increase its involvement in international organisations, such as the World Health Organization, to promote stronger global governance on AMR.

An assessment carried out late last year on the impact of the current five year (2011-16) action plan found that since 2011 there had been an overall decrease in the volume of antimicrobials sold for use in animals and stability in those for humans.

In addition, 21 European countries had national action plans in place, compared with 15 in 2008, and 29 had adopted national



Choose wisely ... in der Pneumologie

Das Zigarettenrauchen ist ein wichtiger Faktor für die Entstehung von chronischen Lungenerkrankungen. Die Messung der Lungenfunktion und das Angebot einer strukturierten Rauchentwöhnung zählen daher zu den empfohlenen Maßnahmen.



Die Verbesserung der Qualität der Patientenversorgung ist ein wichtiges Anliegen der Deutschen Gesellschaft für Pneumologie und Beatmungsmedizin (DGP). Deshalb unterstützt die DGP die Initiative „Klug entscheiden“ der Deutschen Gesellschaft für Innere Medizin (Karter).

Inhalatives Zigarettenrauchen spielt bei mehreren pneumologischen Erkrankungen eine wichtige Rolle. Die Chronisch-obstruktive Lungenerkrankung (COPD) ist eine Volkskrankheit, die in Deutschland in 85 % der Fälle durch Rauchen verursacht wird. Ähnliches gilt für den

Lungenkrebs – nach wie vor der Tumor, der am häufigsten zum Tod führt und eine steigende Tendenz bei Frauen aufweist. Deshalb beziehen sich gleich zwei „Klug entscheiden“-Empfehlungen auf das Thema Rauchen. Jeder Raucher sollte eine objektive Messung der Lungenfunktion erhalten, um frühzeitig krankhafte Veränderungen zu erkennen. Und jedem Raucher mit einer Lungenerkrankung wie COPD, Asthma, Lungenkrebs oder Lungentuberkulose sollte eine strukturierte Tabakentwöhnung angeboten werden.

Unterstützung besteht auch im Bereich der pneumologischen Re-

habilitation: Die Effektivität von Rehabilitation nach akuter Exazerbation einer COPD ist vielfach nachgewiesen. Dennoch erhält nur ein sehr geringer Teil der Patienten eine entsprechende Maßnahme.

Überempfehlung besteht unterschieden bei der Verordnung von Antibiotika für Patienten mit einer unkomplizierten Bronchitis. Diese sollte wegen möglicher Nebenwirkungen und Resistenzentwicklung auf Patienten beschränkt werden, die davon profitieren können. Begrenzt werden sollten auch Computertomographien (CT) des Brustkorbs zur Diagnostik von Lungenerkrankungen und zur Suche nach Lungentuberkulose. Nur wenn bestimmte Kriterien erfüllt sind, ist die CT hilfreich.



Positiv- Empfehlungen

1. Jeder Raucher soll eine Messung der Lungenfunktion erhalten.

Inhalatives Zigarettenrauchen ist die häufigste Ursache einer chronisch-obstruktiven Lungenerkrankung (COPD). Nur durch eine objektive Messung der Lungenfunktion lassen sich auch frühe Stadien einer COPD diagnostizieren. Eine frühe Therapie, die obligat auch das Angebot einer Tabakentwöhnung beinhaltet, verbessert die Prognose. Die Spirometrie bietet darüber hinaus die Chance, dejüngten Raucher zu identifizieren, die die höchste Risiko-kardiorespiratorische Erkrankungen haben und am meisten von preventiven Strategien profitieren. Langitudinale Untersuchungen haben gezeigt, dass bei Rauchern das forcierte expira-



KLUG ENTSCHEIDEN

... in der Pneumologie



Negativ- Empfehlungen

1. Eine akute unkomplizierte Bronchitis bei Patienten ohne chronische Lungenerkrankung soll nicht mit einem Antibiotikum behandelt werden.

Appropriate Antibiotic Use for Acute Respiratory Tract Infection in Adults: Advice for High-Value Care From the American College of Physicians and the Centers for Disease Control and Prevention

Aaron M. Harris, MD, MPH; Lauri A. Hicks, DO; and Amir Qaseem, MD, PhD, MHA, for the High Value Care Task Force of the American College of Physicians and for the Centers for Disease Control and Prevention

- Acute respiratory tract infection (ARTI), which includes acute uncomplicated bronchitis, pharyngitis, rhinosinusitis, and the common cold, is the most common reason for acute outpatient physician office visits and antibiotic prescription in adults. Antibiotics are prescribed at more than 100 million adult ambulatory care visits annually, and **41% of these prescriptions are for respiratory conditions**

Der Fall: Dr. R.D.

41-jährige Patientin

Konsultation am 24.Februar



- Vor 3 Wochen Halsschmerzen, Schnupfen, 2 Tage später Husten, 1 Teelöffel voll gelber Auswurf
- Hausarzt verordnete Roxitromycin 300 für 7 Tage

Der Fall: Dr. R.D.

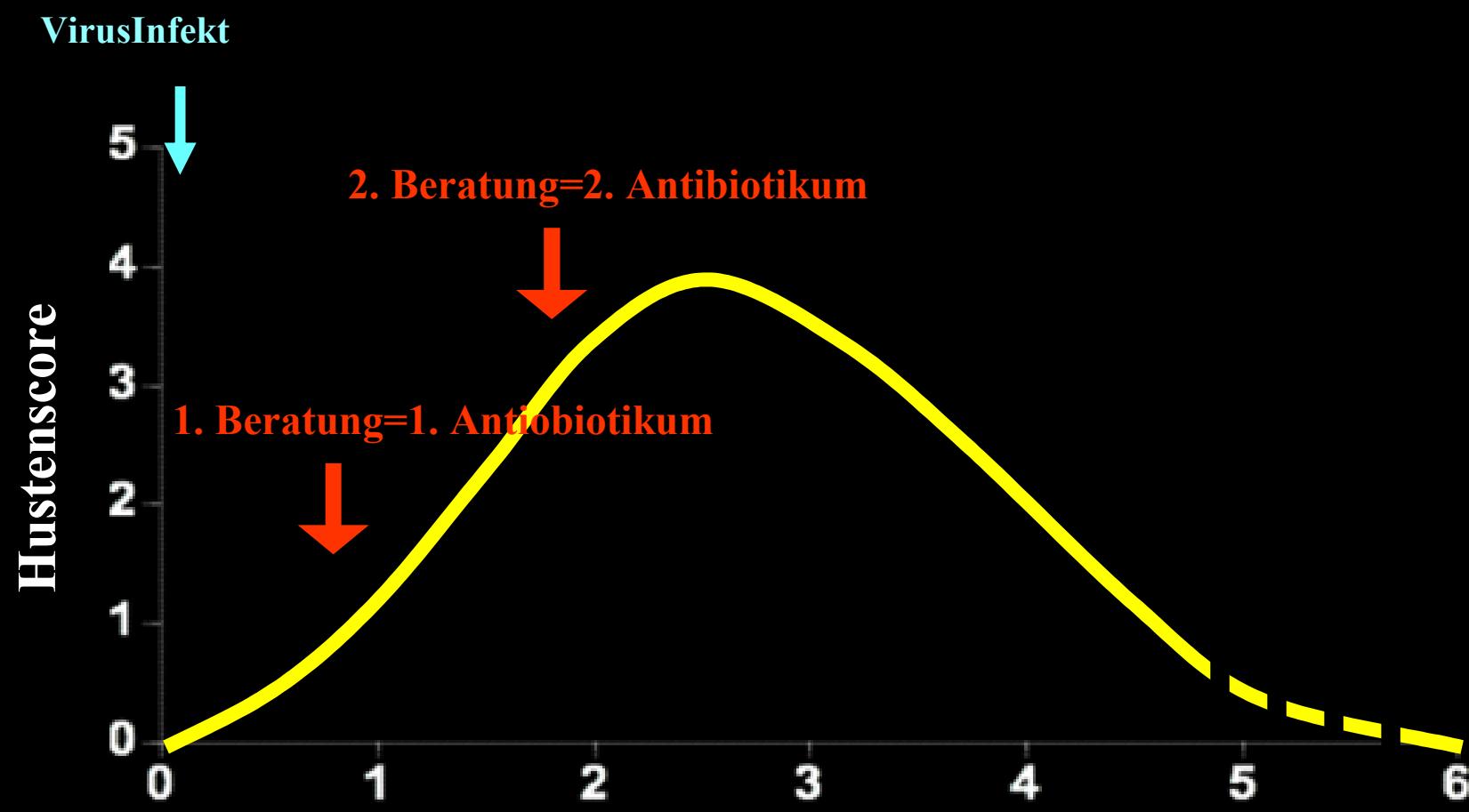
41-jährige Patientin

Konsultation am 24.Februar



- Vor 3 Wochen Halsschmerzen, Schnupfen, 2 Tage später Husten, 1 Teelöffel voll gelber Auswurf
- Hausarzt verordnete Roxitromycin 300 für 7 Tage
- Am 12. Tag: Husten eher schlechter. “Bin sehr verschleimt, kann aber nicht abhusten” → Hausarzt: Verordnung 2x 250 mg Ciprofloxacin
- 20. Tag Vorstellung bei uns: fixes Arzneimittelexanthem
- “Cipro hat ansonsten so gut geholfen”

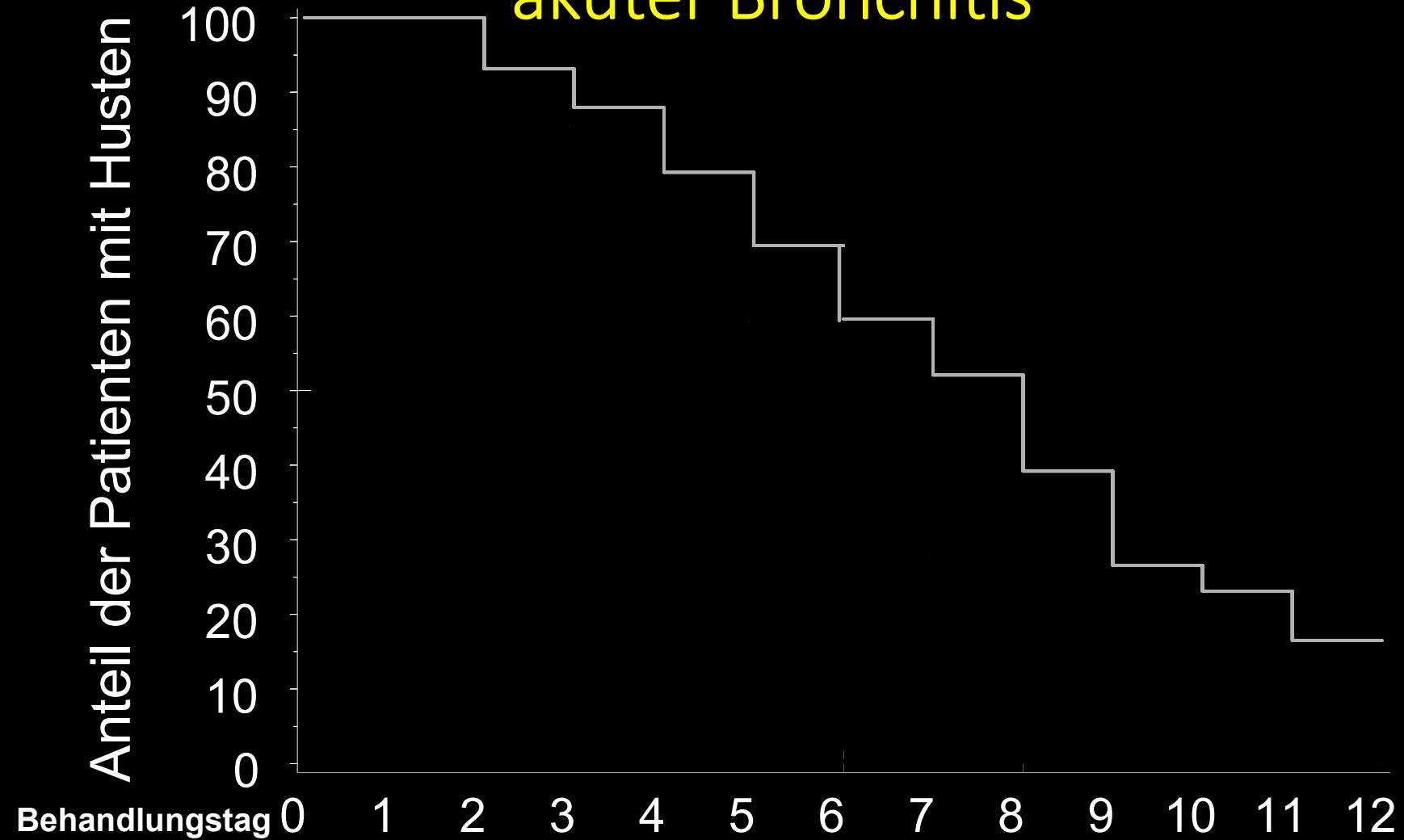
Verlauf des Hustens bei akuter Bronchitis unter Antibiotikum



Williamson, J Fam Pract 1984, Dunlay J Fam Pract 1987

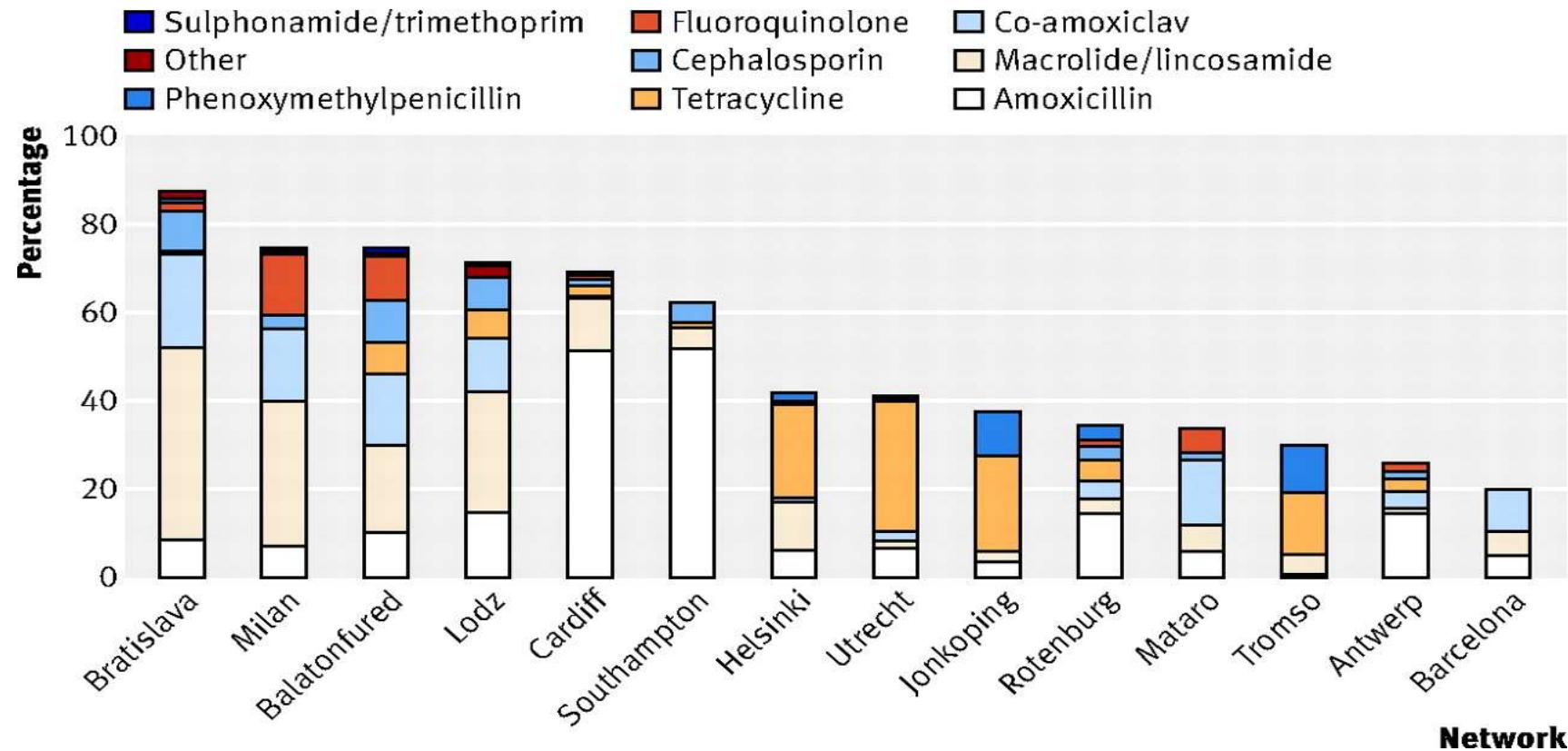
W o c h e n

Verlauf des Hustens unter Plazebo bei akuter Bronchitis



European Primary Care Network

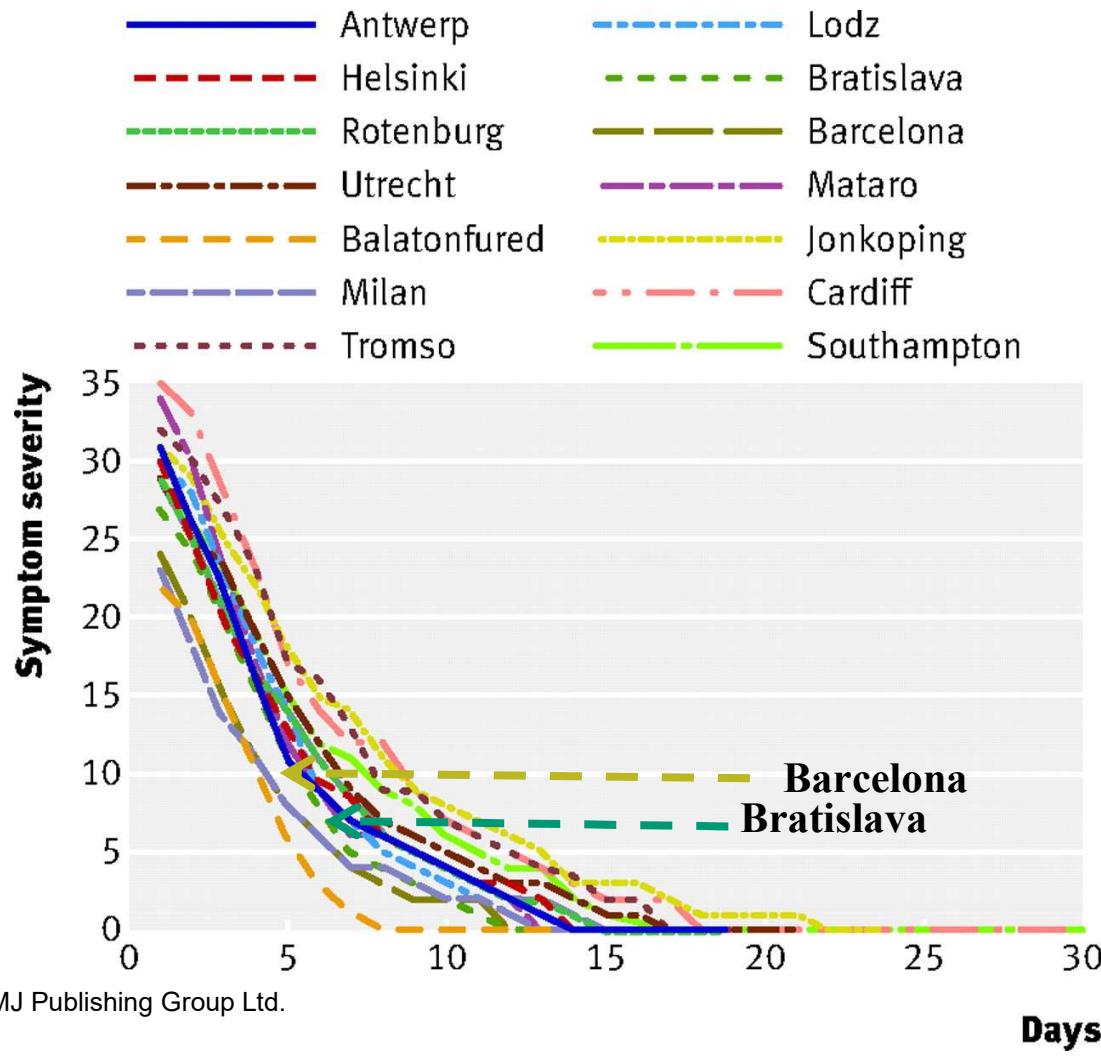
Antibiotika für Erkältung



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Median Symptom Score (1-100)



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Butler, C C et al. BMJ 2009;338:b2242

KFN-Pressekonferenz, 7.12.2016

BMJ

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Assessment of the Effect of Pharmacotherapy in Common Cold/Acute Bronchitis – the Bronchitis Severity Scale (BSS)

Beurteilung der Wirksamkeit von Pharmakotherapie bei
Erkältungen/akuter Bronchitis: Bronchitis Severity Scale (BSS)

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BSS: Bronchitis Severity Scale

Symptome	nicht vorhanden 0	mild 1	moderat 2	schwer 3	sehr schwer 4
Husten					
Sputum					
Rassel-geräusche					
Schmerzen in der Brust beim Husten					
Atemnot					

Studien mit dem Endpunkt BSS

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ORIGINAL CONTRIBUTION

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Phytotherapy in acute bronchitis: what is the evidence?

Peter Kardos

Abstract

Background: Acute bronchitis, frequently emerging with the common cold is one of the most frequent causes of primary care consultations. It is a self-limiting disease which poses both high symptom burden to individuals and high financial burden to society. It is largely a viral disease (~50 % rhinovirus infection), but no causal (antiviral) treatment exists. Antibiotics, mucoactive agents, antihistamines, antitussives, decongestants are most often used but without evidence from randomized controlled trials (RCT) for relieving symptoms or fostering recovery. Many *in vitro* and *ex vivo* studies with standardized herbal extracts did show important effects on inflammatory mediators, mucus hypersecretion, cough and bronchospasm. Moreover, several successful clinical RCT's with unique herbal compounds were published, many other are ongoing.

Methods: Preliminary medline search for randomized controlled studies with herbal medicine for bronchitis.

Results: Eighteen studies were found fulfilling search criteria; six were excluded due to duplicate publication, active comparator control or open design. In 2015 German cough guidelines (in preparation) at least 12 studies will provide evidence for developing recommendations for treatment of acute bronchitis.

Conclusions: In conclusion, several herbal compounds achieved as first pharmaco-therapeutic remedies at all evidence for treatment of acute bronchitis/common cold. Evidence based guidelines are starting to include recommendations for treatment of acute bronchitis/common cold with dedicated phytomedicine.

Keywords: Acute bronchitis; Common cold; Herbal compounds; Phytomedicine; Evidence based treatment

Table 1 Randomized controlled trials with herbal medicine in acute bronchitis

Verum dosage form	Author	Year	Age group	Number of patients	Primary outcome	Result
GeloMyrtol® forte (capsules)	Gillissen <i>et al.</i> [19]	2013	18-83 years	413	Mean change in coughing fits during daytime according to patient's diary from day 0 to day 7–9.	The mean change in coughing fits from day 0 to day 7–9 was significantly higher for verum compared to placebo ($p < 0.0001$) showing superiority. 7.9 % of verum treated patients showed AEs.
EPs 7630 * (drops)	Kamin <i>et al.</i> [22]	2012	1-18 years	220	Change in total score of bronchitis severity score (BSS) from day 0 to day 7	Decrease in BSS total score was significantly higher for verum compared to placebo ($p < 0.0001$). 1.8 % of verum treated patients showed AEs.
EPs 7630 * (drops)	Kamin <i>et al.</i> [21]	2010	1-18 years	200	Change in total score of BSS from day 0 to day 7	Decrease in BSS total score was significantly higher for verum compared to placebo ($p < 0.0001$). In 27.5 % of the patients AEs occurred.
EPs 7630 * (film-coated tablets)	Kamin <i>et al.</i> [20]	2010	6-18 years	400	Dosage finding of EPs-7630 (30 mg, 60 mg, 90 mg) and change in BSS total score from day 0 to day 7 rated by investigator	Change in BSS total score significantly better in 60 mg and 90 mg compared to placebo showing superiority. There were no relevant differences between these two dosages. No superiority was shown for 30 mg compared to placebo. In 19.3 % of the patients AEs occurred.
EPs 7630* (film-coated tablets)	Matthys <i>et al.</i> [23]	2010	> 18 years	406	Dosage finding of EPs-7630 (30 mg, 60 mg, 90 mg) and change in BSS total score from day 0 to day 7	The differences in the change of BSS between all groups of verum treated patients and placebo treated patients was significant ($p < 0.0001$). Inferiority of 60 mg compared to 30 mg. In 18.5 % of the patients AEs occurred.
EPs 7630* (drops)	Matthys and Funk [24]	2008	18-66 years	217*	Change in BSS from day 0 to day 7	BSS decreased significantly more in verum compared to placebo ($p < 0.0001$). In 21.3 % of verum treated patients AEs occurred.
EPs 7630* (drops)	Matthys and Heger [25]	2007	> 18 years	205	Change in BSS from day 0 and day 7	The total score of BSS decreased from day 0 to day 7 with verum compared to placebo showing superiority. In 7.8 % of the patients AEs occurred.
EPs 7630* (drops?)	Chuchalin <i>et al.</i> [26]**	2005	> 18 years	124	Change in BSS from baseline to day 7	The decrease in BSS showed a significant decrease of verum compared to placebo ($p < 0.0001$). Adverse events occurred in 23 % of patients.
EPs 7630* (drops)	Matthys <i>et al.</i> [27]	2003	> 18 years	468	Change in BSS from baseline to day 7	The decrease in BSS showed a significant superiority of verum against placebo ($p < 0.0001$). Adverse events occurred in 7.7 % of the patients.
Fixed combination of dry extracts of thyme herb and primrose root (film-coated tablets)	Kemmerich [17]	2007	18-85 years	361	Change in mean frequency of coughing fits during daytime at day 7–9 compared to baseline measured with a manual counter and recorded in a patient diary	The mean reduction in coughing fits on days 7–9 compared to baseline was significantly higher for verum compared to placebo ($p < 0.0001$) showing superiority. Adverse events occurred in 1.7 % of the patients.
Fluid extract combination of thyme herb and ivy leaves (syrup)	Kemmerich <i>et al.</i> [18]	2006	18-87 years	361	Change in mean frequency of coughing fits during daytime at day 7–9 compared to baseline measured with a manual counter and recorded in a patient diary	The mean reduction in coughing fits on days 7–9 compared to baseline was significantly higher for verum compared to placebo ($p < 0.0001$). Adverse events occurred in 4.1 % of the patients.
Fixed combination of thyme and primrose root (drops)	Gruenwald <i>et al.</i> [28]	2005	> 18 years	150	Change in BSS at day 7–9 (end of treatment) compared to baseline	Decrease of BSS was significantly higher for verum compared to placebo. Adverse events occurred in 4.7 % of the patients.

*Pelargonium sidoides

**This data are also included in the publication #25 (double publication)