Management of respiratory tract infections – myths, facts and solutions

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Specialist in Oto-Rhino-Laryngology
Specialist in Allergology and Clinical Immunology
Psychosomatic and Psychosocial Medicine
Medical Hypnosis, Phytotherapy

Switzerland
RTI’s in children

- 97%: viral infection
- Most common cause for visiting the physician
  - respiratory tract infections in children are more severe due to anatomic and physiologic factors (smaller diameter of bronchial tubes, mucosa swells faster and stronger, very viscous mucus)
  - children suffer up to 12 infections per year due to their immature immune system (maturation with 10 years)
3 common treatment options

- Wait and see...
- Antibiotics
- Antiviral medication
Acute complications
e.g. pneumonia/otitis media in
- Small children
- Older people
- Patients with immunodeficiencies

Risk of chronification
- Asthma or chronic bronchitis

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**Jonson JS et al.: BMJ 1998; 317: 1433
Antibiotics frequently used – rarely useful

Efficacy of antibiotics in acute bronchitis

Cochrane Review

- There is no benefit in using antibiotics for acute bronchitis in otherwise healthy individuals

- Use of antibiotics needs to be considered in the context of the potential side effects…increased resistance to respiratory pathogens and cost of antibiotic treatment

Antibiotic Resistance – a Global Challenge

... frequent use of antibiotics = increasing resistance!

Bronzwaer SI et al., Emerging Infectious Diseases 2002; 8 (3): 278–282
Viral resistance more often than expected

The extent of resistance development due to therapy exceeds current expectations significantly\(^2\)

Occurrence of resistances against neuraminidase inhibitors:

- Amantadine and rimantadine up to 30 %\(^3\)
- Oseltamivir up to 4 % of adults\(^4\)
- Oseltamivir up to 18 % of children\(^1\)

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Pelargonium sidoides extract EPs® 7630 - Umca®

is a standardized and registered phytopharmaceutical with proven efficacy and safety in the treatment of RTI’s in children and adults.
Mode of Action in RTI’s

Viral Attack

Antiviral/immunomodulatory

Inflammation

Bacteria

antibacterial

Mucus production

secretomotoric

Course of RTI’s

Pharmacological Profile of Pelargonium sidoides
Mode of action (I)

- Increases the interferon production\(^1\)

  - direct antiviral effect
  - protects cells against virus-mediated destruction
  - Activation of NK-cells

1: Kolodziej H et al.: Phytomedicine 2007; 14 (Suppl. VI): 18-26
Inhibition of Neuraminidase

Neuraminidase inhibition assay (H1N1)

RFU = rel. fluorescent units

Theisen et Muller, Antiviral Research 2012; 94: 147 - 156
**Antiviral effects of EPs® 7630**

Influence of EPs® 7630 on a cytopathic effect (CPE) caused by respiratory viruses (microscopic examination) and on cell viability

<table>
<thead>
<tr>
<th>Virus</th>
<th>IC&lt;sub&gt;50&lt;/sub&gt; (µg/ml)*</th>
<th>CC&lt;sub&gt;50&lt;/sub&gt; (µg/ml)**</th>
<th>TI***</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Influenza</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1N1</td>
<td>9.45 ± 2.94</td>
<td>&gt;100</td>
<td>&gt;10.6</td>
</tr>
<tr>
<td>H3N2</td>
<td>8.66 ± 1.06</td>
<td>&gt;100</td>
<td>&gt;11.5</td>
</tr>
<tr>
<td>H5N1 (avian)</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>n.d.</td>
</tr>
<tr>
<td><strong>RSV</strong></td>
<td>19.65 ± 1.77</td>
<td>&gt;100</td>
<td>&gt;5.1</td>
</tr>
<tr>
<td><strong>Adenovirus 3 and 7</strong></td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>n.d.</td>
</tr>
<tr>
<td><strong>Parainfluenza 3</strong></td>
<td>74.35 ± 17.89</td>
<td>&gt;100</td>
<td>&gt;1.3</td>
</tr>
<tr>
<td><strong>Coxsackie A9</strong></td>
<td>14.80 ± 3.39</td>
<td>&gt;100</td>
<td>&gt;6.8</td>
</tr>
<tr>
<td>Rhinovirus</td>
<td>&gt;100</td>
<td>&gt;100</td>
<td>n.d.</td>
</tr>
<tr>
<td><strong>Coronavirus 229E</strong></td>
<td>44.50 ± 15.84</td>
<td>&gt;100</td>
<td>&gt;2.3</td>
</tr>
<tr>
<td>(HCo-229E)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Concentration that inhibits CPE formation by 50%
** Concentration that decreases cell viability by 50%
*** Therapeutic index = CC<sub>50</sub>/IC<sub>50</sub>

Anti-influenza activity of EPs® 7630 in mice

Survival Analysis, 1MLD$_{50}$

10 female Balb/c mice, infected with 1 LD$_{50}$ influenzavirus A/Puerto Rico/8/34, treatment with EPs® 7630, three times/day for 10 days

Survival (*100%)

with EPs® 7630
without EPs® 7630

P=0.003

Theisen et al., Muller, Antiviral Research 2012; 94: 147 - 156
Antiviral effects of EPs® 7630

EPs® 7630

- inhibits an early step in the virus life cycle
- interferes with viral surface proteins and impaires viral hemagglutination and neuraminidase activity
- protects mice from lethal viral infection

EPs® 7630 promises to be beneficial if used as a treatment for virus infections

Theisen et Muller, Antiviral Research 2012; 94: 147 - 156
Mode of action (II)

- direct bacteriostatic effect (is inferior to that of antibiotics)\(^1\)
- inhibits the adhesion of bacteria to healthy mucosal cells\(^2\)
- inhibits the internalisation of bacteria in mucosal cells\(^2\) (i.e. fewer recurrences)
- increases the adhesion of bacteria to dead epithelial cells\(^3\)
- increases phagocytosis, oxidative burst and intracellular killing of bacteria\(^4\)

Inhibition of bacterial adhesion

Control: *Fluorescence microscopy*

Conrad A et al.: Phytomedicine 2007; 14 (Suppl. VI): 52-59
Mode of action (III): secretomotoric

Secretolytic action

EPs®7630 improves the secretolytic activity

Determination of tracheobronchial secretion of intraperitoneally injected phenol red in mice

Mode of action - Summary

**Anti-viral:**
- inhibition of replication of most important respiratory viruses\(^1\)
- inhibition of neuraminidase activity\(^2,3\) and hemagglutination\(^3\)
- stimulation of interferon-β-synthesis\(^4\)

**Anti-bacterial:**
- inhibition of bacterial adherence\(^5\)
- inhibition of bacterial internalization\(^5\)

**Secretomotor/-lytic:**
- improvement of ciliary beat frequency\(^6\)
- secretolytic activity\(^7\)

Clinical trials

> 25 clinical trials: placebo-, reference-controlled, open and PMS

Total number of patients: > 10,000

6,037 patients
Adolescents and adults

4,530 patients
Children (< 12 years)
EPs® 7630 – clinically proven in different RTIs

19 double-blind placebo-controlled studies in different respiratory tract infections*

- Acute bronchitis
- Chronic bronchitis
- Common cold
- Tonsillopharyngitis
- Acute sinusitis

Clinical Efficacy and Safety of Liquid *Pelargonium sidoides* Preparation (EPs 7630) in Children with Acute Non-Streptococcal Tonsillopharyngitis

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¹Shupyk National Medical Academy of Postgraduate Education, Kyiv, Ukraine
²ISO-Pharmaceuticals, Erlangen, Germany
³Universitaet zu Koeln, Institut fuer Medizinische Statistik, Informatik und Epidemiologie, Koeln, Germany
⁴Charite-Universitaetsmedizin Berlin, Otto-Heubner-Center for Pediatric and Adolescent Medicine (OHC), Department of Pediatric Hematology and Oncology, Berlin, Germany
### Efficacy in acute tonsillo-pharyngitis

<table>
<thead>
<tr>
<th><strong>Study setup:</strong></th>
<th>Multi-center, prospective, randomized, placebo-controlled, double-blind</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patients:</strong></td>
<td>124 children (6-10 years old) (duration of complaints &lt;48h, symptom severity of 5 typical tonsillitis symptoms &gt;8 points, negative test for β-hemolytic streptococci)</td>
</tr>
<tr>
<td><strong>Treatment duration:</strong></td>
<td>6 days (check-up examinations after 2, 4 and 6 days)</td>
</tr>
<tr>
<td><strong>Intervention:</strong></td>
<td>3 x 20 drops EPs® 7630 solution or placebo</td>
</tr>
</tbody>
</table>

### Efficacy in acute tonsillo-pharyngitis

#### Evaluation criteria

<table>
<thead>
<tr>
<th>Primary outcome:</th>
<th>Change in total score of the 5 typical tonsillitis symptoms between baseline and day 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- dysphagia</td>
</tr>
<tr>
<td></td>
<td>- sore throat</td>
</tr>
<tr>
<td></td>
<td>- salivation</td>
</tr>
<tr>
<td></td>
<td>- reddening</td>
</tr>
<tr>
<td></td>
<td>- fever</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary outcomes:</th>
<th>Assessment of 7 further disease symptoms: swelling of pharynx, uvula, tonsils and lymph nodes, pain on pressure on lymph nodes, headache, pain in the limbs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Global assessment of treatment success by physician and patients/legal representatives (based on a rating scale), consumption of paracetamol</td>
</tr>
</tbody>
</table>

Study results: acute tonsillo-pharyngitis

Decrease in total score of the 5 typical tonsillitis symptoms under EPs® 7630 and placebo treatment (ITT)

Study results: acute tonsillo-pharyngitis

Patients fully recovered (complaint-free) by day 6 according to patient-rating (ITT)

Study results: acute tonsillo-pharyngitis

EPs® 7630

- is superior to treatment with placebo (statistically significant difference)
- requires a more rapid onset of action with EPs® 7630 than placebo within four days of treatment (e.g. in 87% vs. 30% of patients)
- requires a less frequent application of paracetamol over a markedly shorter period of time
- shows a low incidence of adverse events
- was evaluated as well or very well tolerated by the patients

First-line treatment of the acute non-streptococcal tonsillo-pharyngitis

Efficacy and safety of EPs® 7630 in common cold


- **Study design:** Multi-center, prospective, randomized, double-blind, placebo-controlled
- **Patients:** 103 patients aged 18 to 55 years, suffering from common cold
- **Duration:** 10 days
- **Dosage:** 3 x 30 drops EPs® 7630 solution or placebo
- **Primary Outcome:** Sum of Symptom Intensity Differences (SSID) of the Cold Intensity Score (CIS) from day 1 to day 5

Inclusion criteria

- Presence of 2 major and at least 1 minor cold symptom
- Or presence of 1 major and 3 minor cold symptoms
- Presence of cold symptoms for 24-48h

* Major symptoms: Running nose, sore throat

* Minor symptoms: Nasal congestion, cough, hoarseness, headache, aching muscles, fever

Lizogub et al. 2007
Efficacy and safety of EPs® 7630 in common cold

Changes in the CIS from day 0 till day 10

Lizogub et al. 2007
Efficacy and safety of EPs® 7630 in common cold

Conclusion

- EPs is an effective and safe treatment of common cold compared to placebo.
- It significantly reduces the severity of symptoms
- It significantly shortens the duration of disease

Lizogub et al. 2007
## EPs® 7630 in acute rhinosinusitis

<table>
<thead>
<tr>
<th>Study design:</th>
<th>multi-center, prospective, randomized, placebo-controlled, double-blind</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients:</td>
<td>103 adults (18-60 years old) (confirmed by sinus radiography, severity of symptoms ≥ 12 points)</td>
</tr>
<tr>
<td>Duration:</td>
<td>22 days (check-up examinations after 7, 14, and 21 days)</td>
</tr>
<tr>
<td>Dosage:</td>
<td>EPs® 7630 solution: 3 x 60 drops or placebo</td>
</tr>
<tr>
<td>Primary outcome:</td>
<td>Change of the 6 typical sinusitis symptoms on day 7:</td>
</tr>
<tr>
<td></td>
<td>- headache</td>
</tr>
<tr>
<td></td>
<td>- maxillary pain</td>
</tr>
<tr>
<td></td>
<td>- maxillary pain worsening when bending forward, percussion or pressure</td>
</tr>
<tr>
<td></td>
<td>- nasal obstruction</td>
</tr>
<tr>
<td></td>
<td>- purulent nasal secretion</td>
</tr>
<tr>
<td></td>
<td>- purulent nasal discharge visualized in the middle meatus or purulent postnasal discharge</td>
</tr>
</tbody>
</table>

C. Bachert, A. Schapowal, P. Funk, M. Kieser:
**Results: Sinusitis Severity Score (SSS)**

- **EPs® 7630 (n=51)**
- **Placebo (n=52)**

*\( p = 0.2230 \)  **\( p < 0.0001 \)

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**EPs® 7630 in acute rhinosinusitis**

Bachert et al. 2009
EPs® 7630 in acute rhinosinusitis

Results: SSS individual symptoms (Day 7)

- Headache: p = 0.0270
- Maxillary pain: p = 0.0003
- Maxillary pain on bending/pressure/percussion: p = 0.0002
- Nasal obstruction: p = 0.0006
- Purulent nasal secretion: p = 0.0001
- Purulent post-nasal secretion: p < 0.0001

Bachert et al. 2009

EPs® 7630 (n=51)
Placebo (n=52)
EPs® 7630 in acute rhinosinusitis

Conclusion

- Statistically significant and clinically relevant improvement in SSS
- Relevant improvement in state of health (IMOS)
- Shortened period of disability (Ability to work on day 7: EPs® 7630 (62.7% patients) vs. placebo (36.5% patients)
- Good tolerability

EPs® 7630 compared to placebo is an effective and well tolerated therapeutic option for the treatment of acute maxillary sinusitis

Bachert et al. 2009
Case report: Bela, 12.5 year old school boy

**Anamnesis:**

- Persistent allergic rhinitis and asthma for 10 years, especially March – September
- Sore and itchy throat when eating apples and carrots
- Recurrent respiratory tract infections with rhinitis, pharyngitis, tonsillitis, bronchitis, asthma exacerbations

**Current therapy:**

- Cetirizine 10 mg on demand, Seretide 120 inhaler once daily during asthma exacerbation, antibiotics in RTIs 6 times in the last 12 months
- Family doctor proposed tonsillectomy
## Case report: examination findings

<table>
<thead>
<tr>
<th>Examination Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENT status:</strong> reddenened palatine arches, reddenened and slightly swollen nasal mucosa, reddenened conjunctiva, auscultation: no wheezing</td>
</tr>
<tr>
<td><strong>Skin prick test</strong> positive to pollens (grass, barley, oats, rye, wheat, dandelion, alder, hazel, birch, european beech, oak, robinia, ash-tree) and house dust mites</td>
</tr>
<tr>
<td><strong>Total IgE 460 kU/l,</strong> specific IgE dermatophagoides farinae &gt;100.00 kU/l, dermatophagoides pteronyssinus 68.90 kU/l, apple 2.44 kU/l, carrot 1.07 kU/l</td>
</tr>
<tr>
<td><strong>Eosinophils 6.6 %,</strong> antistreptolysine titer 456 kU/l</td>
</tr>
<tr>
<td><strong>Nasal provocation test</strong> positive to dermatophagoides pteronyssinus and dermatophagoides farinae</td>
</tr>
<tr>
<td><strong>Spirometry:</strong> Mild obstruction</td>
</tr>
<tr>
<td><strong>Metacholine challenge:</strong> moderate hyperreactivity, PD 20: 387.5 µg</td>
</tr>
</tbody>
</table>
Case report: diagnosis and treatment

Chronic tonsillitis - tonsillectomy

Recurrent RTIs – EPs® 7630 3 x 30 drops from the very beginning for at least 7 days, 3 RTIs and no need for antibiotics in the last 12 months

Persistent allergic rhinitis, persistent allergic asthma, food allergy

Mometasone nasal spray 2 x 1, Seretide 250 diskhaler 2 x 1

Specific subcutaneous immunotherapy with dermatophagoides pteronyssinus and dermatophagoides farinae 50 : 50, and with grass and birch pollen extract 50 : 50 for three years

Allergen avoidance: Encasing of mattress, bedcover, pillow; no apples, no carrots
Comprehensive therapy with threefold mechanism of action:

- antiviral effects
- antibacterial effects
- secretomotoric/secretolytic
Take-Home-Messages

- Unique product
- Intensively researched
- Clinically proven in RTI’s in a high patient number (>10,000)
- Extensive clinical research data and experience in children
- Shortens the duration of the disease
- Fast onset of action
- Significant symptom relief
- Treats the cause of infection
- No antimicrobial resistance
- Excellent safety profile
İlginize çok teşekkür ederim!

andreas@schapowal.ch
Akut bronşit

• Akut bronşit; trakeobronşiyal ağacın akut inflamasyonudur.
• Bu inflamasyon sonucunda havayolu mukozasında ödem ve sekresyon artışı olur.
• Sıklıkla bir üst solunum yolu enfeksiyonu ile birlikte veya onu takiben ortaya çıkar.
Akut bronşitte olguların %85-95’si viral kökenli

- Basit akut bronşit ile ilişkilendirilmiş en yaygın patojenler, influenza A ve B virüsleridir
- Diğer yaygın viral patojenler:
  - Parainfluenza virüsü
  - Rinovirüs
  - Koronavirüs
- Respiratuvar sinsityal virüs (RSV), sıklıkla 1 yaşından küçük çocuklar ve yaşlılarla ilişkilendirilmektedir
- Olguların %30’unda, hastalarda birden fazla viral enfeksiyon saptanabilir
Akut bronşitte bulgular

- Hastaların %50’sinde 3 haftadan kısa süren, %25’inde 1 aydan uzun süren öksürük
- Hırlıtılı soluma
- Balgam oluşumu
- Göğüs ağrısı
- Yorgunluk
Akut bronşitte komplikasyonlar

Tedavi eksikliği veya uygunsuz bir tedavi, istenmeyen sonuçlara sebep olabilir:

• Sekonder bakteriyel enfeksiyon
• Yaşamı tehdit edici enfeksiyonlar (örn: pnömoni)
• Kronikleşme
• Kronik bronşit
• Alerjik astım
Semptomatik tedavi: Avantaj/Risk

- **Semptom giderici ilaçlar**
  - Mukolitik /ekspektoranlar
  - Antipiretikler
  - Dekonjestanlar ve antihistaminikler
  - Bronkodilatatörler

- **Semptom gidericilerin sorunları:**
  - Sadece semptomlara etki etmektedir
  - Hastalığın nedenini tedavi etmemektedir
  - Yan etkilere neden olabilmektedir
    - örn. Dekstromeotrangan, nörodavranışsal değişikliklere yol açabilir.
### Akut bronşitte Umca, iki benzer çalışma!

<table>
<thead>
<tr>
<th>Primer amaç:</th>
<th>Akut bronşiti olan 1-18 yaş arası hastalarda EPs® 7630 solüsyonunun etkinliği ve güvenliği</th>
</tr>
</thead>
<tbody>
<tr>
<td>Çalışmaların tasarımı:</td>
<td>Randomize, çift-kör, plasebo-kontrollü klinik çalışmalar</td>
</tr>
<tr>
<td>Doz:</td>
<td>1 - 5 yaş, 3x10 damla, 6 - 12 yaş, 3x20 damla, &gt;12 - 18 yaş, 3x30 damla, 7 gün boyunca EPs® 7630 veya aynı şekilde plasebo</td>
</tr>
<tr>
<td>Primer kazanım kriteri:</td>
<td>0 ile 7. günler arasında BSS (Bronşit semptom skorlaması) değişimi</td>
</tr>
</tbody>
</table>
| BSS (Bronşit semptom skorlaması) semptomları | • Öksürük  
  • Dinlemekle pulmoner raller  
  • Dispnea |

Akut bronşitte Umca

BSS’nin zaman ile değişimi:

Çalışma I (ITT analizi; n=200)

EPs® 7630-solution in acute bronchitis in children (Study II)
(BSS; ITT-analysis; n=220)


*   p < 0.0001
Akut bronşitte Umca

Hekim değerlendirmesine göre, 7. gün tedaviden kazanım:

Çalışma I (ITT analizi; n=200)

Tam iyileşme/Önemli iyileşme
Orta iyileşme/Değişiklik yok/Kötüleşme yok

Çalışma II (ITT analizi; n=220)

Tam iyileşme/Önemli iyileşme
Orta iyileşme/Değişiklik yok/Kötüleşme yok


P değerleri:
iki yönlü Cochran-Mantel- Haenszel testi
Akut bronşitte Umca

7. Gün kreşe, anaokuluna, okula dönenebilen hastalar:


Her iki çalışmanın sonucu

• Hızla ortaya çıkan etki
• Bulgularda erken düzelve
• Öksürük ve ral sıklık ve şiddetine belirgin azalma
• Tüm yaş gruplarında benzer etkinlik
• 7. günde tüm bronşit bulgularında anlamlı azalma
• 7. günde tedaviye yanıt oranı iki kat daha fazla
• 7. günde okula gidebilme oranında belirgin fark

Kamin 2010 ve 2012
Diagnosis and Treatment of Acute Bronchitis

Antibiotics should not be used routinely for the treatment of acute bronchitis.

The following therapies may be considered to manage bronchitis-related symptoms:
- Antitussives (dextromethorphan, codeine, hydrocodone)
- Beta-agonist inhalers in patients with wheezing
- High-dose episodic inhaled corticosteroids
- Echinacea
- Dark honey in children

The following medicines should not be used to manage bronchitis-related symptoms:
- Expectorants
- Beta-agonist inhalers in patients without wheezing
- Antitussives in children younger than six years

Ross, Diagnosis and treatment of acute bronchitis, Am Fam Physician, 2010

UMCA, Akut Bronşitte, Amerika Aile Hekimleri Akademisi Kılavuzunda önerilmektedir.
UMCA, Akut bronşitte, Avrupa Solunum Topluluğu Kılavuzunda önerilmektedir

**Table 1. Clinical recommendations for acute bronchitis and evidence rating**

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Evidence rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased fluid intake, heated and humidified air, and avoidance of smoking and second-hand tobacco smoke</td>
<td>C</td>
</tr>
<tr>
<td>Antibiotics should not be routinely used</td>
<td>A</td>
</tr>
<tr>
<td>Antivirals should not be routinely used</td>
<td>B</td>
</tr>
<tr>
<td>Antitussives (dextromethorphan, codeine and hydrocodone) are recommended in adults</td>
<td>B</td>
</tr>
<tr>
<td>Antitussives are not recommended in children</td>
<td>B</td>
</tr>
<tr>
<td>( \beta_2 )-agonist inhalers are recommended in patients with wheezing</td>
<td>B</td>
</tr>
<tr>
<td>( \beta_2 )-agonist inhalers are not recommended in patients without wheezing</td>
<td>B</td>
</tr>
<tr>
<td>Expectorants are not recommended in adults</td>
<td>B</td>
</tr>
<tr>
<td>High-dose episodic inhaled corticosteroids are recommended</td>
<td>B</td>
</tr>
<tr>
<td>Analgesics and NSAIDs are recommended</td>
<td>C</td>
</tr>
<tr>
<td>Echinacea is recommended</td>
<td>B</td>
</tr>
<tr>
<td>Pelargonium is recommended</td>
<td>B</td>
</tr>
<tr>
<td>Chinese herbs are recommended</td>
<td>B</td>
</tr>
<tr>
<td>Honey is recommended</td>
<td>B</td>
</tr>
</tbody>
</table>

Llor, Acute Bronchitis, Eur Respir Monogr, 2013
Yerel ve Uluslararası Kılavuzlarda Umca

**Uluslararası Kılavuzlar**

**Avrupa Solunum Monografisi**
ERS, Llor C., 2013

- Akut bronşitte önerilmiştir.
- B kanıt düzeyi

**Avrupa Rinosinüzit Kılavuzu**
EPOS, Fokkens, 2012

- Akut rinosinüzitte önerilmiştir.
- A öneri düzeyi

**Lokal Kılavuzlar**

**Almanya: S3 Öksürük rehberi**
German College of General Practitioners and Family Physicians:
- Akut bronşitte önerilmiştir.

**Almanya: S3 Rinosinüzit rehberi**
- Akut rinosinüzitte önerilmiştir.

**ABD: Amerikan Aile Hekimleri Kılavuzu**
American Family Physicians (Ross 2010):
- Akut bronşitte önerilmiştir. B kanıt düzeyi

American Family Physicians (Fashner 2012):
- Soğuk algınılığında önerilmiştir.
Yan etkiler:

Nadiren:
• Gastro-intestinal bulgular (karın ağrısı, yanma, bulantı, diare)

Çok nadiren:
• Hafif diş eti veya burun kanaması
• Hipersensitivite reaksiyonları (fasiyal ödem, dispne, KB düşmesi)

Kontrendikasyonlar:
• UMCA’nın içinde bulunan maddelerden herhangi birine karşı aşırı duyarlılık,
• Kanama eğiliminde artışın bulunduğu hallerde ve antikoagülan ilaçlar uygulanırken,
• Yeterli deneyim bulunmadığı için, şiddetli böbrek ve/veya karaciğer yetmezliği olanlarda

Etkileşim:
• Plasebo kontrollü, çift-kör çalışmada, UMCA ve penisilin V arasında hiçbir etkileşim görülmemiştir.
Güvenlik ve tolerabilite profili

Günlük doz*
990,000,000

vs

Advers olay insidansı
1.24
tanımlanan milyon dozda

Buna göre, ortalama 7 günlük tedavi döneminde 115,000 hastadan yalnızca 1 hastada yan etki görülecektir.

*Schwabe verisi: 1992-2016 yılları arasında satılan günlük doza göre
Klinik çalışmalarında Umca’nın güvenliği

19 çift-kör, plasebo kontrollü klinik çalışmada EPs 7630 ile görülen advers etkilerin tipleri ve insidansları, plasebo ile tedavi edilen hastalarla aynıdır.

Aktif etkin madde: Pelargonium sidoides kökü ekstresi (1:8-10) (EPs® 7630)
Ekstraksiyon ajanı: etanol 11 % (m/m)

Doz: Doz koreasyonu:
1 tablet (20 mg) = 30 damla solüsyon = 7.5 ml şurup

Relapsı önlemek için, tedavi semptomlarının kesilmesinden sonra 2 gün daha devam ettilmeldiir.

Endikasyon: Akut solunum yolu enfeksiyonlarının tedavisi
Umca, özetle...

- Çok yoğun olarak araştırılmış, **etki mekanizması ortaya konmuş**
- Etkililiği çok sayıda hastada kanıtlanmıştır **(10.000)**,
- Çocuklarda da yoğun klinik çalışma ve deneyim **(> 4000)**,
- **Hızlı ortaya çıkan etki,**
- Semptomlarda belirgin düzelme/azalma,
- Hastalığın süresinde en az **2 gün kısalma**, kazanım...
- Enfeksiyonun nedenine etkili,
- **Direnç söz konusu değil,**
- Çok İyi bir güvenlik profili
Akut solunum yolu enfeksiyonlarında komplikasyonları önlemekte antibiyotığın yeri yoktur!
Buna karşı, Antibiyotik tüketiminde (maalesef) birinciyiz...
Türkiye’de antibiyotik direnci yıllar boyunca artmaktadır

Direnç Gelişimi

Resistensi % 2014 & Resistance % 2016

www.oecd.org/health/antimicrobial-resistance.htm
2050 yılında, Dünya’da 10 milyon kişinin antimikrobiyal direnç sebebi ile tedavi edilemeyen enfeksiyonlardan öleneceği düşünülmektedir.

Antimikrobiyal dirençten tedavi edilemeyen hastalar

- **Tetanoz**: 60,000
- **Trafik kazası**: 1,2 milyon
- **Kızamık**: 130,000
- **İshale bağlı hastalıklar**: 1,4 milyon
- **Kancer**: 8.2 milyon
- **Kolera**: 100,000 - 120,000
- **Diyabet**: 1,5 milyon

Original Article

Infant antibiotic exposures and early-life body mass

L Trasande, J Blustein, M Liu, E Corwin, L M Cox and M J Blaser

Objectives:
To examine the associations of antibiotic exposures during the first 2 years of life and the development of body mass over the first 7 years of life.

Design:
Longitudinal birth cohort study.

Subjects:
Antibiotic Exposure and IBD Development Among Children: A Population-Based Cohort Study

WHAT'S KNOWN ON THIS SUBJECT: Inflammatory bowel disease pathogenesis is incompletely understood. Previous pediatric studies suggested associations between antibiotic use and inflammatory bowel disease development but were limited by recall bias, lack of controls, incomplete antibiotic capture, or included exposures between symptom onset and diagnosis.

WHAT THIS STUDY ADDS: Our population-based cohort study suggests that certain childhood antibiotic exposures are associated with an increased risk of developing inflammatory bowel disease. Our findings have implications for understanding the condition's pathogenesis and provide additional stimulus for reducing unnecessary childhood antibiotic use.

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KEY WORDS
antimicrobials, epidemiology, inflammatory bowel disease, pediatric, population-based studies

ABBREVIATIONS
aHR—adjusted hazard ratio
CI—confidence interval

DOI: 10.1542/peds.2011-3660
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Antibiotic Use in Children Is Associated With Increased Risk of Asthma

Fawziah Marra, Carlo A. Marra, Kathryn Richardson, Larry D. Lynd, Anita Kozyrskyj, David M. Patrick, William R. Bowie, J. Mark FitzGerald
Antibiotic Use in Children Is Associated With Increased Risk of Asthma

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Young children's antibiotic exposure associated with higher food allergy risk

Date: September 1, 2016
Source: University of South Carolina
Summary: Antibiotic treatment within the first year of life may wipe out more than an unwanted infection: exposure to the drugs is associated with an increase in food allergy diagnosis, new research suggests.
Antibiotic treatment increased risk for type 1 diabetes in animal study

Date: August 22, 2016
Source: NYU Langone Medical Center / New York University School of Medicine

Summary: In doses equivalent to those used regularly in human children, antibiotics changed the mix of gut microbes in young mice to dramatically increase their risk for type 1 diabetes.

"This is the first study of its kind suggesting that antibiotic use can alter the microbiota and have lasting effects on immunological and metabolic development, resulting in autoimmunity.

We're eager to see how these findings may impact the discovery of type 1 diabetes preventive treatments in the future and continued research in the area of vaccines."

Jessica Dunne, director of Discovery Research at Juvenile Diabetes Research Foundation
Sağlıklı bir intestinal sistem – disbiyozis ilişkisi
12-18 Kasım Antibiyotik Farkındalıık Haftası

Antibiyotik farkındalık haftanızı kutlar, gerekşiz antibiyotik kullanımına karşı gösterdiğiniz hassasiyet için teşekkür ederiz.