Multi-PBRN Collaboration - New Treatment for Refractory Asthma

Conflict of interest disclosure

I have no conflicts of interest that relate to this presentation

Agenda

Multi-PBRN Research
Refractory Asthma: Definition & Prevalence
Available Treatments: Conventional vs. Innovative (Macrolides for Long Term Management of Asthma)
Multi-Network PBRNs

Wisconsin Research & Education Network (WREN)
AAFP National Research Network (NRN)
Ambulatory Network for Scholarship & Research (ANSR)
Cleveland Ambulatory Research Network (CLAREN)
Oklahoma Physicians Resource/Research Network (OKPRN)
Wisconsin Network for Health Research (WiNHR)

Volunteerism
- Directors
- Clinicians
- Patients

Neglected Topic That Was Important

Refractory Asthma

Biologically non-responsive to Inhaled Steroids-LABAs
- Uncontrolled after optimizing treatment
"Difficult To Treat" Asthma
- Remains uncontrolled for other reasons
Both are characterized by poor asthma control
Asthma Control

Easy to measure
- Asthma Control Test (ACT) - 12 and above
- Child Asthma Control Test (C-ACT) - 5 to 11

Anywhere
- Clinic, Home, Travelling

Anyhow
- Electronically, Paper, Verbally

Asthma Control Test (ACT)

Asthma Control in Five European Countries

Compared to Controlled (ACT≥20) asthma patients
Not Well Controlled (ACT≤19) asthma patients have

- More activity limitations (40.8% vs 1.5%)
- More breathlessness ≥3 times weekly (72.5% vs 5.4%)
- More rescue medication ≥2-3 times weekly (77.4% vs 15.9%)
- More healthcare utilization (17.4% vs 9.9%)
- More absenteeism (12.2% vs 5.5%)
- More work impairment (30.0% vs 15.4%)
- Decreased quality-of-life (P<.001)

Demoly et al. Update on asthma control in five European countries. Eur Respir Rev 2010
Uncontrolled Asthma is Common

50% of all adult asthmatics are suboptimally controlled
- ACT ≤ 20
15% are severely uncontrolled
- ACT ≤ 15
1 in 7 adult asthmatics is severely uncontrolled
Exact proportions of refractory & “difficult to treat” asthma are unknown

Conventional Options for Refractory Asthma

Oral Steroids
Anti-fungals
Anti-IgE injections
Intravenous Immunoglobulins
Methotrexate

Macrolides for the long-term management of asthma - a meta-analysis of randomized clinical trials
Roter et al. Allergy 2013; 68:1040-1049

Significant benefits for
- Symptoms
- Quality of Life
- Bronchial Hyper-reactivity
- Peak Flow
No significant change in FEV1
Summary

Azithromycin is a promising new treatment for severe/uncontrolled/refractory asthma
Safe, inexpensive, limited treatment
- 3-6 months: prolonged response in ~half of refractory asthma patients

Hahn et al
AZMATICS
JABFM 2012

Change From Baseline in AQL
48 Weeks Post-Enrolment

Change From Baseline in AQL Difference from Baseline

Rand Pla Rand Azithro Open-label
Azithromycin is Cost-Effective
AzMATICS v Peters et al. NEJM 2010

$/AQLY

- Tiotropium: $19,000
- Salmeterol: $8,000
- Beclomethasone, double dose: $23,000
- Azithromycin (Rand): $2,000
- Azithromycin (Open): $450

Conclusions
Collaborative (PBRN/patient) research can be innovative and practice-changing
Azithromycin is an option for informed patients with severe/uncontrolled/refractory asthma
“You can’t manage what you don’t measure”
- Monitor results using the ACT or C-ACT

A Cure for Asthma?