

RSV Kills 66,000-199,000/yr Under Age 5 Globally

BY KERRI WACHTER

An estimated 33.8 million new episodes of respiratory syncytial virus–associated acute lower respiratory infection occurred worldwide in children younger than 5 years of age in 2005, based on results of the first study to take a global view of this deadly infection.

The systematic review and meta-analysis used published and unpublished incidence and mortality data for respiratory syncytial virus (RSV)–associated acute lower respiratory infection (ALRI) in both industrialized and developing countries.

The researchers estimated that, worldwide, 3.4 million young children developed RSV-associated severe ALRI necessitating hospital admission and 66,000-199,000 children younger than 5 years of age died from the infection. A total of 99% of these deaths occurred in developing countries, reported Dr. Harish Nair and his coauthors (Lancet April 16 [doi:10.1016/S0140-6736(10)60206-1]).

The authors pointed out that “substantial uncertainty surrounds case fatality ratio estimates from developing countries. To that end, the researchers calculated three estimates of RSV-associated ALRI fatalities to assess the upper and lower bounds, yielding the 66,000-199,000 range.

The incidence of RSV-associated ALRI in developing nations was twice that for industrialized nations. “This estimate represents roughly 22% of all episodes of ALRI in young children,” wrote Dr. Nair, a public health sciences doctoral student at the University of Edinburgh, and colleagues.

In an accompanying commentary, Dr. Caroline Breese Hall, professor of pediatrics and infectious diseases at the University of Rochester (N.Y.), highlighted the importance of the study. The researchers “provide the best current estimates of the global under-5 burden of RSV-associated acute lower respiratory tract infections, and convincingly posit the virus as the foremost cause of all lower respiratory-tract infections in young children worldwide” (Lancet April 16 [doi:10.1016/S0140-6736(10)60401-1]).

The researchers started by performing a systematic literature review using a combination of search terms, manual searching of online journals, and scanning reference lists of identified citations. Studies were limited to those from January 1995 to June 2009. In addition, the researchers “invited the participation of researchers who had done similar studies resulting in unpublished data or supplementary data from published work.”

As inclusion criteria, the researchers chose to use ALRI and severe ALRI, including bronchiolitis and pneumonia. ALRI was considered the presence of cough or difficulty breathing with indrawing of the lower chest wall with fast breathing for age. Severe ALRI was considered the presence of cough or difficulty breathing with indrawing of the lower chest wall (with or without fast

VITALS

Major Finding: 33.8 million new episodes of respiratory syncytial virus–associated acute lower respiratory infection are estimated to have occurred worldwide in children younger than 5 years in 2005. Mortality related to the infection was estimated to be 66,000-199,000.

Data Source: Systematic review of 36 incidence studies, including 10 unpublished studies.

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breathing for age) that required hospitalization.

Dr. Nair and his associates identified 36 studies with suitable data: 19 published population-based studies, 7 published studies based on hospital discharge records and laboratory diagnosis reports, and 10 unpublished population-based studies. The researchers noted that

few studies reported data for the full age range (0-5 years).

Dr. Nair reported that he has no relevant financial relationships, but several of his coauthors reported receiving grant funding and/or honoraria from various vaccine manufacturers. Dr. Hall reported that she has received consultation fees and grant support from MedImmune Inc. ■

People who have had chicken pox are at risk for shingles and postherpetic neuralgia (PHN) pain^{1,2}
This year, ~1 million Americans will develop shingles.^{1,2}
1 in 5 of them will go on to develop PHN pain¹



Indication

LIDODERM (lidocaine patch 5%) is indicated for relief of pain associated with post-herpetic neuralgia. Apply only to **intact skin**.

Important Safety Information

LIDODERM is contraindicated in patients with a history of sensitivity to local anesthetics (amide type) or any product component.

Even a *used* LIDODERM patch contains a large amount of lidocaine (at least 665 mg). The potential exists for a small child or a pet to suffer serious adverse effects from chewing or ingesting a new or used LIDODERM patch, although the risk with this formulation has not been evaluated. It is important to **store and dispose of LIDODERM out of the reach of children, pets, and others**.

Excessive dosing, such as applying LIDODERM to larger areas or for longer than the recommended wearing time, could result in increased absorption of lidocaine and high blood concentrations leading to serious adverse effects.

Avoid contact of LIDODERM with the eye. If contact occurs, immediately wash the eye with water or saline and protect it until sensation returns.

Avoid the use of external heat sources as this has not been evaluated and may increase plasma lidocaine levels.

Patients with severe hepatic disease are at greater risk of developing toxic blood concentrations of lidocaine, because of their inability to metabolize lidocaine normally. LIDODERM should be used with caution in patients receiving Class I antiarrhythmic drugs (such as tocainide and mexiletine) since the toxic effects are additive and potentially synergistic. LIDODERM should also be used with caution in pregnant (including labor and delivery) or nursing mothers.

Allergic reactions, although rare, can occur.

During or immediately after LIDODERM treatment, the skin at the site of application may develop blisters, bruising, burning sensation, depigmentation, dermatitis, discoloration, edema, erythema, exfoliation, irritation, papules, petechia, pruritus, vesicles, or may be the locus of abnormal sensation. These reactions are generally mild and transient, resolving spontaneously within a few minutes to hours. Other reactions may include dizziness, headache, and nausea.

When LIDODERM is used concomitantly with local anesthetic products, the amount absorbed from all formulations must be considered.