Pneumonia Multi-centric Pilot Study

Coordinated by the Emerging Pathogens Laboratory Fondation Mérieux

Type of activity:
Applied research, Technology transfer and training

Regions/ Beneficiary countries :
Brazil, Cambodia, China, Haiti, Lebanon, Madagascar, Mali, Mongolia, Paraguay

Partners:
Laboratory of Respiratory Viruses - IOC and FIOCRUZ in Brazil

Rodolphe Mérieux Laboratory of Faculty of Pharmacy in Cambodia

Institut of Pathogen Biology/Christophe Mérieux Laboratory/Chinese Academy of Medical Sciences in China

Rodolphe Mérieux Laboratory of GHESKIO Center in Haiti

Rodolphe Mérieux Laboratory of Faculty of Pharmacy of Saint Joseph University in Lebanon

Centre of Infectiology Charles Mérieux of Antananarivo University of Madagascar

Centre of Infectiology Charles Mérieux in Mali

Mongolian Academy of Medical Sciences Research Institute of Health Sciences

Update:
June 20, 2011

PROJECT DESCRIPTION

The Pneumonia Multi-centric Pilot Study was launched in 2010 in the framework of Fondation Mérieux's applied research activities coordinated by the Laboratory of Emergent Pathogens (LPE) and the GABRIEL* network. Designed as a prospective multi-centric case-control study, this research project is carried out in 9 country sites belonging to GABRIEL network: Brazil, Cambodia, China, Haiti, Lebanon, Madagascar, Mali, Mongolia, and Paraguay with the collaboration of hospitals and partnerships from local research institutions.

The pilot study follows a harmonized protocol (total sample size: 900 cases and 900 controls of under 5 years old children) that has gone through central and site IRB/IRE approval and is run under good clinical practices (GCP) compliance. A scale-up of the study is planed in a second phase.

The final purpose of this study is to deliver information on pneumonia causative agents (bacteria and/or viral) enabling better case management of the pneumonia sick child. This should result in the reduction of child morbidity and mortality in the given regions and in the potential development of medical preventive approaches.

STUDY OBJECTIIVES

Principal objective

To identify the viral and bacterial agents associated with severe pneumonia in hospitalized children under five years of age to determine their etiological distribution and involvement in the onset of pneumonia.

Secondary objectives

- To study the viral/bacterial co-infection and if it constitutes a risk factor in the severity of the disease.
- To establish a correlation between the type of pathogens identified (bacterial or viral) and the biomarkers: C reactive protein (CRP) and Procalcitonin (PCT).
- To identify the serotypes of *Streptococcus pneumoniae* in nasopharyngeal and blood samples.
- To identify and characterize new infectious agents or variants (bacterial or viral) in samples with unknown etiologies.

Project Activities

- Study baseline, conception and ethical validation
- Technology transfer and training
- Study phases: Study Initiation, Study Implementation and Monitoring and Study Closing
- Data analysis and evaluation
- Publication of results from the Pilot Study and discussion with stakeholders, civil society groups and public health actors.

Fig 1. Algorithm for Cases

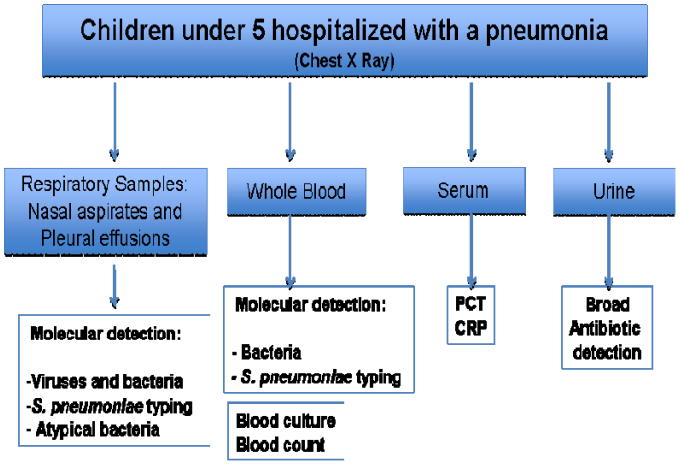
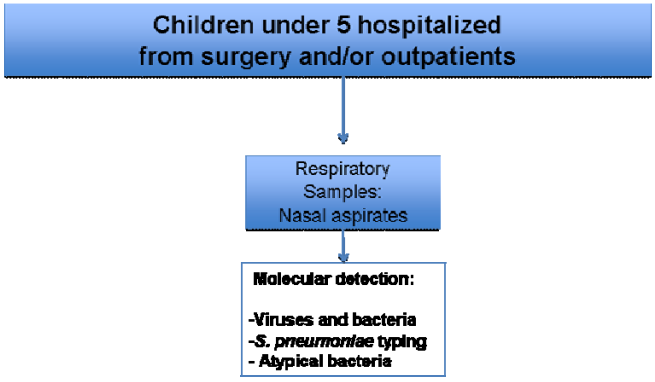


Fig 2. Algorithm for Controls



* GABRIEL (Global Approach for Biological Research on Infectious Epidemics in Low-income countries) http://www.gabriel-network.org