

1967. In 1976 trachoma was considered eradicated in the State, and the control program was interrupted. In 1983 cases of chronic conjunctivitis in children started being reported again, and subsequent studies showed trachoma had never been truly eradicated. State's trachoma control program was re-established, and in the past twenty years several studies have redesigned its distribution in the State.

From hyperendemic prevalence levels in the first half of the century, trachoma rates gradually decreased in Sao Paulo. Prevalence survey among schoolchildren detected a rate of 4.4% in 2002. Endemic trachoma is still found in most municipalities of the State, in some of them reaching as high as 10% prevalence among children, threshold for the recommendation of mass treatment. This neglected disease remains as a public health problem in the State, especially among the poorer segments of the population.

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Study of Severe Community-Acquired Pneumonia in Adults - Etiology, Prognosis, and Antibiotic Therapy

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Objective: A retrospective study of 128 patients with severe community-acquired pneumonia was carried out to determine the causative agents, the impact foreknowledge of the etiology has on the outcome, the value of clinical and radiologic criteria in predicting the evolution, and the efficacy of empirical therapy.

Method: From the beginning of 1999 until 2006, we studied 128 patients who required hospitalization for severe community acquired pneumonia. The clinical criteria for admission to the study were respiratory failure (PaO₂ < 60 mmHg), septic shock, extrapulmonary septic complications, radiographic evidence of more than one affected lobe, cavitation, or an initial pleural effusion greater than the occupation of the lateral costophrenic angle.

Result: The study group included 84 men and 44 women (mean age: 70.2 ± 12.3 yr), and 67.2 % suffered from a concurrent debilitating disease. The cause of pneumonia was diagnosed in 61 cases, and the most common pathogens were *Streptococcus pneumoniae* (36.1%), *Mycoplasma pneumoniae* (14.8%), Methicillin-resistant *Staphylococcus aureus* (9.8%), *Haemophilus influenzae* (8.2%), *Chlamydia psittaci* (6.6%), Legionella pneumonia (4.9%), and the other gram-negative bacilli. (19.7%). The fact that fungal infections were present in six patients and *Pneumocystis carinii* in two are worthy of note. The overall death rate was 32.8%. A fatal outcome was related to the age of the patient ($p < 0.05$), the presence of debilitating disease ($p < 0.05$), and septic shock ($p < 0.0001$). Diagnosis of the causative agents did not aid in increasing the survival rate, but it did allow for better patient management. Most of the patient (75%) initiated on treatment with Ampicillin Sodium plus New Quinolone (Levofloxacin Hydrate) recovered, but only 66.4% of the

subjects commenced on treatment with other therapeutics survived.

Conclusions: Gram-negative bacillary pneumonia was a frequent finding among the patients who did not recover, making empirical treatment with Betamipron plus New Quinolone most advisable for severe cases of community-acquired pneumonia.

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A Four-Year Prospective Observational Study of Bacteremias and Fungemias in a Large, Tertiary Care Hospital of Northern Italy

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Background: A prospective microbiological surveillance study of bacteremias is ongoing at our Hospital since the year 2004.

Materials and Methods: The temporal trend of microbial isolates from blood cultures of inpatients hospitalized during the last four calendar years (2004 to 2007), was evaluated according to the main bacterial and fungal isolates. The same pathogens cultured more than once from the same patient within one month, have been considered only once.

Results: Of 4,606 overall episodes, Staphylococcal epidermidis remained the leading organism (983 cases: 21.3%), but a dramatic drop in its frequency occurred during the observation time (from 26.1% of cases in 2004, to 14.3% in 2007; $p < .0001$). The second cause of bacteremia was *Escherichia coli* (463 episodes: 10.1%), followed by *Staphylococcus aureus* (327 cases: 7.1%), *Enterococcus faecalis* (245 episodes: 5.3%), *Pseudomonas aeruginosa* (170 cases: 3.7%), *Klebsiella spp.* (123 episodes: 2.7%), and *Enterococcus faecium* (117 cases: 2.5%). Significant time-based modifications occurred only for *Pseudomonas aeruginosa* (temporal increase: $p < .02$), *Klebsiella spp.* (temporal increase: $p < .001$), and *Enterococcus faecium* (temporal increase: $p < .05$). Among fungi, *Candida albicans* was the most represented organism, with 104 episodes (2.3%), without changes in its frequency in the 2004–2007 period.

Conclusions: A prospective microbiological monitoring is expected to significantly add to the awareness of local epidemiological figures and antimicrobial sensitivity profile of hospital infections, including bacteremias, which are responsible for considerable morbidity and mortality rates among inpatients. Although the main ethiological agents of inpatient bacteremias are still represented by coagulase-negative Staphylococci, these microorganisms significantly declined during the four-year study period, thus confirming a positive trend toward a progressively reduced incidence of contaminated blood cultures. On the other hand, an appreciable increased frequency occurred over time for *Pseudomonas Klebsiella*, and *Enterococcus spp.* A major, persisting role as agents of hospital bacteremic episodes

is still exerted by *Escherichia coli* among Gram-negative pathogens, and *Staphylococcus aureus* among Gram-positive ones.

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Outbreak of Halophilic *Vibrio* Infections Associated with a Major Environmental Disaster

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Background: In the United States, isolated pathogenic vibrios have a marked seasonal peak. More than 90% of cases occur between April and October, presumably reflecting seasonal changes in shellfish consumption, recreational water use and documented increase in the densities of vibrios in Gulf coast water during warmer months.

Method: We report an unusual cluster of noncholera-genic *Vibrio* infections reported to the Mississippi State Department of Health, Jackson, Mississippi, United States of America (USA) in the immediate aftermath of Hurricane Katrina.

Results: A total of 12 patients were admitted to Gulf area hospitals from August 29th through September 1st 2005. The median age of patients was 76 years (range = 60–83 years), sex distribution consisting of 9 males and 3 females. Blood and/or wound cultures revealed 8 cases of *V. vulnificus*, 2 cases of *V. parahaemolyticus*, one case of *V. fluvialis*, and one case of *Vibrio* species. Nine patients had visible skin wounds that probably served as the portal of entry for the *Vibrio* bacteria present in flood waters. Chronic medical conditions that could increase susceptibility to *Vibrio* infection were present in 75% of patients (namely: diabetes [$n=3$], heart disease [$n=7$], renal insufficiency [$n=2$], human immunodeficiency virus (HIV) [$n=1$] and alcohol abuse [$n=4$]). Majority of patients had sepsis and required intensive care, including respiratory support ($n=5$). All patients were covered with appropriate antibiotics (cephalosporins, doxycycline, Vancomycin, aminoglycosides, and fluoroquinolones). Four patients died on admission, one patient was transferred to another facility, and three persons recovered and were discharged home. The disposition of the remaining 4 patients remains unknown.

Conclusion: Health care providers should be aware of the possibility of *Vibrio* wound infections in high-risk persons in natural disaster settings and the importance of early diagnosis and treatment in such patients.

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A Serological Follow-Up Study of Acute Q Fever Infection

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Background: After acute Q fever infection, patients with certain predisposing factors are at risk to develop chronic Q fever. However, there are few reports describing the results of routine serological follow-up for patients infected with acute Q fever.

Methods: A prospective serological follow-up study was conducted from August to November 2007. Persons with onset of acute Q fever more than 6 months before the date of follow-up blood sampling were eligible. The indirect immunofluorescence assay was used for serological diagnosis. PCR testing was performed only on samples suggestive of chronic Q fever with anti-phase I IgG titer $\geq 1:800$.

Results: Of 92 (male: 85, female: 7) eligible persons enrolled with the interval between onset of acute Q fever and follow-up blood sampling ranging from 169 days to 1,253 days (medium: 607 days), 17 subjects (18%) were found to have serological evidence of chronic Q fever (titers of anti-phase I IgG: 1:1280~1:5120, medium: 1:1280). All these subjects were asymptomatic and had negative PCR results. History taking revealed no pregnancy, immunocompromised status or valvular defects on these subjects when acute Q fever occurred. Medical consultation suggested only continued serological and clinical follow-up for these subjects.

Conclusion: Approximately 18% subjects were found to have serological profiles indicative of chronic Q fever after acute infection. It suggested that routine serological follow-up might need to be practiced on patients after acute Q fever infection whether history taking revealed relevant risk factors.

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Epidemiology, Invasiveness and Comparative Proteomic Analysis of Group B Streptococcus (GBS) of Indian Origin

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GBS causes life threatening diseases like pneumonia, meningitis, sepsis in newborn babies. Although, lot of information is available in developed countries but there is very limited knowledge about the prevalent serotype and pathogenesis of GBS in India. Serotyping is important for our understanding of the epidemiology of GBS disease and in