for histopathological examination and in situ PCR testing.

RESULTS: Histopathological examination confirmed the clinical diagnosis in only 45% of the cases; nonspecific histopathology was reported for the remaining 55% of the cases. In situ PCR showed a positivity of 57.1% in the early/localized form of leprosy (indeterminate/borderline tuberculoid) and 61.5% in the borderline borderline/borderline lepromatous group. When compared with the histopathological examination, a significant enhancement of 15% in diagnosis was seen. With in situ PCR, the diagnosis could be confirmed in 4 (36.3%) of 11 cases with nonspecific histopathological features (which is common in early disease) in addition to confirmation of 8 (88.8%) of 9 histopathologically confirmed tissue sections. Histopathology and in situ PCR combined together confirmed the diagnosis in 13 (65%) of the 20 cases.

CONCLUSIONS: In situ PCR is an important diagnostic tool, especially in early and doubtful cases of leprosy.

DETECTION AND MOLECULAR SEROTYPING OF GROUP B *STREPTOCOCCUS* IN FATAL NEONATAL PNEUMONIA IN CHINA

Submitted by Jianghong Deng

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INTRODUCTION: Group B *Streptococcus* (GBS) has been recognized as an important pathogen in neonatal infectious disease. However, there are few data on the prevalence of neonatal GBS infection in China.

OBJECTIVE: Our aim was to estimate the infection rate of GBS in neonatal pneumonia in China and identify distribution of the GBS serotype.

METHODS: We retrospectively studied 200 children with fatal neonatal pneumonia who died between 1953 and 2004; 34 fatal neonatal cases without any infectious disease were used as a control group. Paraffin-embedded lung tissues were collected for total genomic DNA extraction. Polymerase chain reaction (PCR) and Southern blotting were used for GBS detection and molecular serotyping.

RESULTS: (1) The positive rate of GBS in the pneumonia group was significantly higher than that in the control group (PCR: 26% vs 3% [$P < .01$]; Southern blot: 65% vs 18% [$P < .01$]). (2) The positive rate in neonates younger than 7 days was significantly higher than that in neonates older than 7 days (PCR: 37% vs 13% [$P < .01$]; Southern blot: 72% vs 52% [$P < .05$]). (3) Risk factors were identifiable for most GBS-positive cases. (4) In the pneumonia group, 22 GBS-positive cases were serotypeable: 7 cases were identified as serotype Ia, 6 cases were serotype III, 5 cases were serotype II, and 1 case was serotype Ib.

CONCLUSIONS: In China, GBS is an important pathogen in fatal neonatal pneumonia, especially in early-onset cases. Serotypes Ia, III, and II were the most common serotypes identified.

PERIPHERAL BLOOD COUNT FOR DENGUE SEVERITY PREDICTION: A PROSPECTIVE STUDY IN THAI CHILDREN

Submitted by Nanthakorn Eu-Ahsunthornwattana

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INTRODUCTION: Dengue viral infection has a wide range of severity levels and requires different levels of medical attention. Early severity prediction using clinical features is difficult. Certain lymphocytic subtypes can be used to predict severity; we postulate that peripheral blood counts can also predict severity, which would be more useful in smaller rural hospitals.

OBJECTIVE: We aimed to compare the peripheral blood counts between patients with mild dengue infection and those with severe dengue infection and identify simple yet sensitive early severity predictors.

METHODS: We enrolled 91 patients with serologically confirmed dengue infection who were admitted to King Chulalongkorn Memorial Hospital. Their leukocytic counts on admission were compared. Potential predictors were identified by using receiver-operating-characteristic analysis.

RESULTS: Compared with patients with mild infection, those with severe infection (dengue hemorrhagic fever grade II or worse) had a higher leukocyte count (3580 vs 3050 cells per μL; $P = .04$), and fewer had leukopenia on admission (70% vs 89%; $P = .03$). They also had a lower percentage of "typical" lymphocytes (24% vs 40%; $P = .02$). Two predictors were identified; either one classified ~19% of all admitted patients as being at low risk. Typical lymphocyte counts of <40% excluded patients with mild disease with 89% sensitivity and 24% specificity (negative predictive value: 77%; positive predictive value: 45%). A combination of parameters [(white blood cells per μL) + 470 × (% typical lymphocytes) + 5 × (atypical lymphocytes per μL) $\geq -14\,950$] improved the sensitivity and specificity to 92% and 26% (negative predictive value: 82%; positive predictive value: 46%).

CONCLUSIONS: The absence of leukopenia and a low percentage of typical lymphocytes predict severe dengue illness. Simple hematologic parameters may be used to reduce unnecessary admissions of patients with sus-

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