



***Streptococcus pneumoniae*-Related Hemolytic-Uremic Syndrome Identified by the Karius Test**

***Streptococcus pneumoniae*-related hemolytic uremic syndrome (pHUS) and the identification of matched cross-country serotypes by plasma next-generation sequencing (NGS)**

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The Karius Test can detect culture-negative infections and has the potential to identify clusters of disease.

PATIENTS

Four pediatric patients (ages ranging 11 - 42 months) from two separate hospitals (Washington, DC and San Diego, CA) were part of this case series.

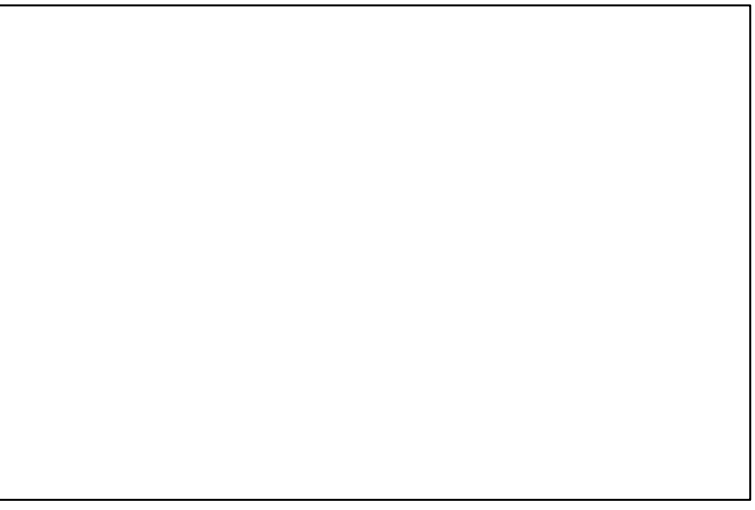
All patients had severe pneumonia with two patients having negative blood and respiratory cultures. These patients also had clinical symptoms consistent with hemolytic-uremic syndrome with three patients requiring hemodialysis via continuous renal replacement therapy.

RESULTS

The Karius Test detected *Streptococcus pneumoniae* in all 4 patients at extremely high levels ranging from ~1 to 150 million MPMs (Molecules of cell-free DNA fragments of the pathogen Per Microliter of plasma).

Further analysis of the sequencing data revealed that *S. pneumoniae* serotype 3 was present in 3 out of the 4 patients. Serotype 3 continues to cause significant invasive disease despite its inclusion in the Pneumococcal Conjugate Vaccine.

This cluster of patients HUS and *S. pneumoniae* would otherwise have gone undetected if they were not all identified via the high levels of *S. pneumoniae* detected by the Karius Test.



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