Measurements fail to identify TB patients who could benefit from shorter treatment course

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Tuberculosis (TB) is a difficult infection to treat and requires six months of multiple antibiotics to cure it. To combat the TB pandemic, a shorter and simpler drug treatment would be a huge advance since most TB occurs in resource-limited settings with poor public health infrastructures.

Testing whether two simple clinical measurements might help identify which TB patients could benefit from shorter treatment, researchers at Case Western Reserve University and University Hospitals (UH) Case Medical Center report that these measurements failed to work in a study published online by the American Journal of Respiratory and Critical Care Medicine.

The two measurements were absence of a cavity (an abscess caused by TB) in the lungs (detected by chest X-ray) and failure to grow TB bacteria from the sputum once drug treatment was started (sputum culture conversion). The Phase III clinical trial involved TB patients in Uganda (Africa), Brazil (S. America) and the Philippines (Asia) and was conducted by the Tuberculosis Research Unit (TBRU) at Case Western Reserve University and UH Case Medical Center in Cleveland, the only National Institutes of Health supported TB unit in the U.S.

"We found that combining these two clinical measurements failed to select TB patients who could benefit from shorter drug treatment. TB

patients receiving four months of TB treatment had their disease come back much more often than those who got six months of drug treatment," said W. Henry Boom, M.D., an infectious disease expert with Case Western Reserve University and UH Case Medical Center and Director of the TBRU. "This study points out the limitations of current clinical measures to identify the relatively small group of TB patients who respond poorly to standard drug treatment."

"To better identify risk factors for why treatment fails in a subset of TB patients will require novel approaches and further research so that we can determine quickly (not having to wait for two years after completing six months of drug treatment to measure relapses) not only the effectiveness of new TB drugs or regimens but also who will benefit most from these shortened and simplified TB treatment regimens," added John L. Johnson, MD, first author of the study and an infectious disease expert with Case Western Reserve University School of Medicine and UH Case Medical Center.

Source: University Hospitals Case Medical Center