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Cystic Fibrosis Research News

Title:
Screening Practices for Nontuberculous Mycobacteria at US Cystic Fibrosis Centers

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What was your research question?
Our research question centered around how current screening practices for nontuberculous mycobacteria (NTM) differ between US CF centers.

Why is this important?
We feel that NTM screening remain widely variable around the US and wanted to highlight some of the differences in screening practices around the country. While bacteria such as MRSA and Pseudomonas have been well described in previous literature, the impact of NTM lung disease remains poorly understood. In examining the differences in screening practices around the country, we hoped to start the process of advancing NTM screening for those living with CF in the US.

What did you do?
We used the CF Foundation Patient Registry to identify all those living with CF at least 10 years and older who had received NTM testing between 2010 and 2014. We compared screening frequencies with change in lung function prior to screening, rates of coinfections with bacteria such as Pseudomonas and MRSA, and by the frequency of flare-up of symptoms (exacerbation rates). We divided CF centers into three groups by screening rates to see how screening practices differed by group.

What did you find?
We found that overall, those tested for NTM generally had lower lung function, higher rates of pulmonary exacerbations, and higher rates of coinfection with Pseudomonas and MRSA. To evaluate screening practices by CF programs, we divided CF programs into groups by testing rates. Those programs who screened at the highest level were less likely to be

influenced by clinical changes, indicating that they were empirically screening all patients in concordance with current guidelines. Programs who screened at lower levels were more likely to be influenced by clinical changes and therefore less likely to be empirically screening all patients. Overall, the programs who screened at a higher rates were more successful in identifying NTM in those living with CF.

What does this mean and reasons for caution?

We believe that screening for NTM should be completed for all those living with CF on a yearly basis, as recommended by the CF Foundation and European CF Society. Based on our findings, it appears that a significant amount of NTM screening is undertaken intermittently due to clinical cues. We believe this means that yearly NTM screening should be emphasized for those living with CF. As this is a retrospective study, however, it should be remembered that these findings need to be further evaluated with prospective studies.

What's next?

The next step in this process would be to evaluate similar comparisons between clinical changes and the decision to initiate treatment for NTM lung disease in those living with CF.

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