Author's response to reviews

Title: How often is a work-up for Legionella pursued in patients with pneumonia? A retrospective study.

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Author's response to reviews: see over
Dear Dr. Renaud

Thank you again for taking the time to review our article entitled “how often is a work-up for Legionella pursued in patients with pneumonia? A retrospective study.” We have addressed the requested revisions, as specified below.

Major revisions:
However, in spite of those modifications of the original manuscript, I think a more specific description of study patient characteristics, overall and within all subgroups would have been of great interest. It appears that this information is not available for the overall study population or would be too time consuming to collect. Therefore, I wonder if the authors would be able to present the baseline characteristics of the restricted subgroup of patients with Legionella pneumonia, and then to compare patients presenting with at least one IDSA/ATS criteria to those that did not present such criteria. Additionally, I would suggest presenting the results for hospital acquired and non hospital acquired pneumonia separately.

As you requested, we have divided the results in the Table into three columns—one for patients with Legionella pneumonia who met IDSA/ATS criteria to be tested, one for patients with Legionella pneumonia that did not meet the criteria, and a third column with all patients with Legionella pneumonia. We did not divide out hospital-acquired vs. community-acquired because the numbers of possible hospital-acquired were very small and these cases were not proven to be hospital-acquired.

Minor revisions:

Please specify in the method section the 5 IDSA/ATS criteria proposed for guiding physician in prompting legionella diagnostic testing, along with the definition of “immunosuppression”, and “hyponatremia.”

The IDSA/ATS criteria and hyponatremia definitions were added to the Methods section. The breakdown of immunosuppressive conditions that were encountered are included in the Table of baseline characteristics.

Page 4, paragraph 2: Please alter “Legionella testing” for “Legionella diagnostic testing”, to be consistent with the expression used in the abstract.

The word “diagnostic” was added.

Please specify how patients with pneumonia were identified? Be more specific. Did the authors select patient records using medical information codification system?
The TII ECLYPSIS computer system uses billing data based on ICD-9 codes to identify patients with a specific diagnosis or patients who have been billed for specific laboratory testing or procedures. Using this program, it is possible to identify all patient with a primary or secondary diagnosis of pneumonia, all patients who had Legionella testing (broken down by specific type of test), and all patients who had bronchoscopy and who were billed for microbiologic tests from a bronchoalveolar lavage. The TII ECLYPSIS system is not, however, a medical information codification system.

Page 5: “Theradoc® was used prospectively”. Given this study was retrospective, I did not understand the exact meaning of this sentence and if this is a useful information. Please, specify.

When laboratory results appear in the electronic medical record at our hospital, the result is also populated within our Theradoc software computer program. The epidemiology and infection control department at Rhode Island Hospital then reviews such results on a daily basis for sentinel organisms such as Legionella to determine if an infection is present and if it is community or hospital-acquired. This occurs prospectively. Therefore, although we accessed the Theradoc system retrospectively for the purposes of this study, patients were identified with Legionella pneumonia prospectively. The manuscript was revised to clarify this point.

Page 6: “Legionella pneumonia was diagnosed at an outside hospital but the legionella….”. Please specify the reason why this patient was excluded. Indeed, this reason was not mentioned in the method section.

Results of urine Legionella testing can remain positive for months after treatment of Legionella pneumonia. When this patient presented to Rhode Island Hospital, they did not have symptoms of ongoing pulmonary infection. The patient had a known history of recent Legionella pneumonia that was adequately treated at an outside facility, thus accounting for the positive legionella result. The results of this positive urine Legionella test did not represent acute presentation of Legionella pneumonia. As such, the data from this patient were excluded.