Impact of timing of diagnosis of respiratory syncytial virus (RSV) disease on hospital length of stay (LOS) in adults: Final analysis from a retrospective chart review study

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BACKGROUND

In hospitals where protocol for testing exists, 52% of RSV patients were tested in the Emergency Department (ED) compared to 40% in hospitals without testing protocol. Patients with RSV diagnosed by rapid RSV-based specific diagnostic tests (rapid RT-PCR RSV assay [7.9 hrs], rapid antigen RSV assay [6.5 hrs], other RSV antigen tests [6.1 hrs], and other RSV diagnostic tests [26.5 hrs]) were significantly associated with a shorter mean LOS (Figure A&B). Patients diagnosed ≥24 hrs post-admission exhibited a trend of greater hospital LOS, but results need to be confirmed by prospective trials.

METHODS

• A retrospective review of patient charts was conducted. Data for adults ≥18 years with confirmed RSV (Oct 2014–Oct 2015) were included. The timeframe of the quantitative analysis period, and were also asked specific questions about their submitted cases, the patients treated, and their submitted cases.

• Of responding physicians, 10 were randomly selected to participate in follow-up anonymous telephone interviews (physicians who were from rural areas of the US, e.g., patients with RSV were classified as “non-lung comorbid” and moderate/low intensity care was provided)

• In order to avoid choosing memorable cases, random selection was ensured through a program which generated a random number to the participants' case number and random numbers in range to be used for selecting cases.

• Rapid RSV-based specific diagnostic tests (rapid RT-PCR RSV assay [7.9 hrs], rapid antigen RSV assay [6.5 hrs], other RSV antigen tests [6.1 hrs], and other RSV diagnostic tests [26.5 hrs]) were significantly associated with a shorter mean LOS (Figure A&B). Patients diagnosed ≥24 hrs post-admission exhibited a trend of greater hospital LOS, but results need to be confirmed by prospective trials.

RESULTS

• The average difference in days between rapid RT-PCR RSV assay and the other methods used for the collection of sample was 2.9 days in ED, 3.4 days in hospital ward (n=187) (both 6.8 days); this was also true for patients admitted to ICU (9.4 vs 7.7 days in ED)

• The causal relationship needs to be confirmed with further evidence suggesting that there is an opportunity for earlier diagnosis with availability of appropriate tests and by establishing a protocol for rapid RSV testing.

CONCLUSIONS

• Complete RSV testing and early diagnosis should be used in adults with RSV infections

REFERENCES


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• Ian Sander and Jessica Zakar were responsible for the statistical analysis. All authors provided direction and comments on the poster and made the final decision about where to present the data. All authors had full access to all the data during the study. The study was supervised by Ian Sander and Jessica Zakar.

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