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Seasonality and prevalence of respiratory pathogens detected by multiplex PCR at a tertiary care medical center.

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This study was a retrospective analysis of the incidence of respiratory pathogens at a tertiary care medical center over the course of a year.

Specimens from a total of 939 patients were analyzed by using the FilmArray® Respiratory Panel. Sixty-five percent (65%, 610/939) of all specimens were positive for at least one analyte; 12% (73/610) of these were positive for more than one analyte. Rhinoviruses/enteroviruses and RSV were the most common viruses encountered in multi-analyte positive specimens (88%). Additionally, rhinoviruses/enteroviruses were the most prevalent analytes encountered in the study overall (34.3%), followed by RSV (19.2%) and hMPV (6.2%).

One advantage of multiplex PCR is the ability to rapidly diagnose and treat specific respiratory pathogens. Additionally, it could be used to reduce nosocomial infections by patient cohorting.

“Multiplex PCR provides rapid diagnostic information that can be used to make knowledgeable clinical decisions and potentially reduce the use of antibiotics. Active respiratory PCR surveillance could also predict seasonal respiratory epidemics to allow for adequate planning of additional infection control measures.”

KEY POINTS

- Syndromic testing of upper respiratory infections may help physicians make clinical decisions and reduce the use of antibiotics.
- Active surveillance of upper respiratory tract infections using PCR may help predict seasonal respiratory epidemics.
- The FilmArray® Respiratory Panel detected a total of 610 positive specimens from 939. Of the positive specimens, 12 % (73/610) were positive for at least two pathogens.