Disclosures. All authors: No reported disclosures.

1978. Long-term Respiratory Complication in Patients with Middle East Respiratory Syndrome: 1-year Follow-up After the 2015 Outbreak in South Korea

Background. There are few data about long-term respiratory complications following Middle East Respiratory Syndrome (MERS-CoV) infection. This study aimed to evaluate respiratory functions and radiologic sequelae according to the severity of infection one year after the patients experienced MERS-CoV infection.

Methods. A total of 73 patients undergoing MERS-CoV infection during the 2015 MERS outbreak in South Korea were enrolled in this prospective multicenter study. Pulmonary function tests and 6-minute walking tests were performed 1 year after infection. Radiologic sequelae was defined as fibrosis or atelectasis on chest computer tomography and severe pneumonia was defined as that requiring oxygen therapy. Multivariate linear regression tests were used to evaluate the effect of infection severity on respiratory function.

Results. At the time of MERS-CoV infection, 18 patients had no pneumonia, 35 experienced mild pneumonia, and 20 did severe pneumonia. The median age was not different between groups (P = 0.942). Forced vital capacity (FVC) was 102.6%, 94.9%, and 88.7% in the no, mild, and severe pneumonia group, respectively (P = 0.010) and forced expiratory volume in 1 second was 105.3%, 95.7%, and 91.7% (P = 0.057). Diffusing capacity (DLCO) was significantly lower in the severe pneumonia group than in the no or mild pneumonia group (78.3% vs. 89.4% or 88.6%, P = 0.035). In multivariate analyses, FVC and DLCO were significantly correlated with infection severity after adjustment with age, sex, underlying lung disease, and smoking. There was no difference in the walking distance of 6 minute tests between groups. Radiologic sequelae were shown in 18.8%, 65.6%, and 100% in the no, mild, and severe pneumonia group, respectively (P < 0.001).

Conclusion. The patients with more severe pneumonia by MERS-CoV had more impaired respiratory function in one year follow-up, which was compatible with radiologic sequelae.

Table: Patient demographics and method of diagnosis

| Subpopulation | Immuno compromised (n = 90) | Other elderly (≥65 years) (n = 110) | Adults without identified risk factors (n = 60) |
|---------------|----------------------------|-----------------------------------|-----------------------------------------------|
| Mean age (years) | 61.8                       | 55.3                             | 70.7                                         | 41.6                                    |
| Male, %        | 56                          | 57                               | 55                                           | 57                                      |
| Race, %        | 57                          | 60                               | 60                                           | 53                                      |
| Caucasian      | 26                          | 22                               | 20                                           | 32                                      |
| Black or African American | 84 | 93 | 89 | 87 |
| Method of RSV diagnosis, % | RTPCR (either RSV-specific or viral panel) | 10 | 4 | 8 | 7 |
| Rapid antigen assay | Others | 13 | 4 | 10 | 10 |
| Unknown        | 13                          | 6                                | 2                                            | 5                                       |

Disclosures. All authors: No reported disclosures.

1979. 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

Background. Despite growing clinical awareness of RSV disease in at-risk adult subpopulations, significant gaps remain in knowledge, especially around diagnosis. This analysis aimed to understand the impact of timing of diagnosis on hospital LOS.

Methods. A retrospective review of patient charts was conducted. Data on adults ≥18 years with confirmed RSV (Oct 2014–Oct 2016; USA) were collected. Each physician (n = 132) submitted up to 3 randomly selected patient cases via an online survey.

Results. This study comprised 379 patients, collected in 4 groups (Table). >80% of patients received an RT-PCR test; rapid antigen tests were uncommon (<10%) with an RT-PCR test also performed in 45% of these. Early RSV diagnosis and less severe disease were associated with a shorter mean LOS (Figure 1 and 2). Patients diagnosed >24h post-admission had a longer mean LOS (9.8 [8.6] days; P = 0.038). LOS was higher (7.4 [4.2] days; n = 56; P = 0.038) in patients diagnosed 12–24h post-admission (6.2 [3.9] days; n = 67; P = 0.006), and patients diagnosed 12–24h post-admission (7.4 [4.2] days; n = 67; P = 0.006) was higher (P = 0.005) in patients diagnosed in the intensive care unit (9.4 days) than the emergency room or hospital ward (both 6.8 days).

Conclusion. RSV disease in adults was typically diagnosed by PCR. Delayed diagnosis and greater RSV disease severity are associated with longer LOS, but results need to be confirmed by prospective trials. Introduction of diagnostic testing protocols may lead to earlier identification of patients in need of supportive care and reduce mean LOS.
Disclosures. E. Walsh, Janssen Pharmaceuticals: Scientific Advisor, Consulting fee; I. Sander, Janssen Pharmaceuticals: Independent Contractor, Licensing agreement or royalty; R. Stolper, Janssen Pharmaceuticals: Independent Contractor, Licensing agreement or royalty; J. Zakar, Janssen: Independent Contractor, Licensing agreement or royalty; G. De La Rosa, Janssen Pharmaceuticals: Employee, Salary; V. Wyefels, Janssen Pharmaceuticals: Employee, Salary; D. Myers, Janssen Pharmaceuticals: Employee, Salary; R. Fleischhackl, Janssen Pharmaceuticals: Employee, Salary

Figure 1: Acute Respiratory Tract Infections Prescribing Rates.

Figure 2: Impact of Curb-65 (severity) score on mean LOS

80. Evaluation of Antibiotic Prescribing for Acute Respiratory Tract Infections in the Ambulatory Care Setting
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Background. Acute respiratory tract infections (RTI), such as sinusitis, pharyngitis, and bronchitis, generate a significant number of outpatient prescriptions and are targets for antibiotic stewardship efforts because they are typically of viral origin and self-limited. The objective of this study is to identify current antibiotic prescribing practices for RTI in a large, outpatient, ambulatory care setting.

Methods. This retrospective, single-center, cohort study was designed to identify the proportion of antibiotics prescribed for the treatment of RTI, during ambulatory care visits for patients >18 years in an urban, public, academic medical center from 11/1/2014 to 7/31/2016. ICD-9-10 codes were used to identify cases. The primary endpoint was the proportion of antibiotics prescribed for the treatment of acute sinusitis, pharyngitis, and bronchitis. Secondary endpoints included: antibiotic agent classes and Clostridium difficile infection (CDI) within 90 days post-antibiotic prescription. Additional data regarding patient demographics, medical history, allergies, antibiotic dosing and course, and prescriber information were collected.

Results. For acute bronchitis, 142/345 (41%) encounters were associated with an antibiotic, mostly amoxicillin (84.5%). For acute sinusitis, 511/988 (52%) encounters were associated with an antibiotic, mostly amoxicillin-clavulanate (52%). For acute pharyngitis, 271/1038 (26%) encounters were associated with an antibiotic, mostly penicillin VK (45%). Seasonality in prescribing rates were observed. There were three cases of CDI within 90 days of an antibiotic prescription, one following azithromycin use for bronchitis and two following amoxicillin-clavulanate use for sinusitis.

Conclusion. A significant number of visits for RTI could benefit from antibiotic stewardship interventions. Antibiotic prescribing for acute bronchitis is never clinically appropriate. Furthermore, prescribing rates for acute sinusitis and pharyngitis were much higher than the expected appropriate rate based on national epidemiologic data. These local prescribing data can be used to direct patient and provider education and to provide a baseline to measure the effect of stewardship interventions.

1981. Microbiological and Clinical Significance of Prior Hospitalization in Patients Admitted with Community-onset Pneumonia: A Propensity Score-matching Study
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Background. Although prior hospitalization (PH) has been considered as a risk factor for infection with potentially drug-resistant (PDR) pathogens in patients with community-onset (CO) pneumonia, the evidence is limited. We aimed to elucidate the clinical impact of PH on these patients.

Methods. This retrospective observational cohort study with prospectively collected data was conducted at Jeju National University Hospital between January 2012 and December 2014. We classified the study patients into PH-associated pneumonia (PHAP) and community-acquired pneumonia (CAP) groups. Propensity scores were constructed to improve the balance of baseline characteristics between two groups, and the clinical outcomes were compared. We also conducted subgroup analyses based on prior antibiotic use, duration of PH, and time to re-admission.

Results. A total of 704 patients were identified; the PHAP group included 97 patients (13.7%). Patients with PHAP had more comorbidities than those with CAP. And the median CURB-65 and PSI scores were higher in patients with PHAP than in those with CAP. After matching according to propensity scores, the baseline characteristics of the PHAP group were similar to those of the CAP group. The isolation rate of PDR pathogens as well as the 30-day and total in-hospital mortality did not differ between the PHAP and propensity score-matched CAP patients (14.4% vs. 9.2%; P = 0.267; 13.4% vs. 13.4%, P = 1.000; and 17.5% vs. 14.4%, P = 0.557, respectively). In subgroup analyses, PHAP patients with prior antibiotic use or duration of PH > 10 days showed significantly higher isolation rates of PDR pathogens. Multivariate logistic regression analysis demonstrated that prior antibiotic use was associated with the isolation rate of PDR pathogens (adjusted OR: 5.066; 95% CI: 1.231–20.845).

Conclusion. PH itself might not be related with higher isolation rates of PDR pathogens or mortality in patients with CO-pneumonia. Therefore, it seems reasonable that broad spectrum antibiotic therapy for PDR pathogens should be selectively applied to PHAP patients with prior antibiotic use.

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1982. Parainfluenza Virus in Hospitalized Adults: A 7-Year Retrospective Study
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