Table 1: Frequency and source of cultures by SARS-CoV-2 status

| Culture Source | SARS-CoV-2 Positive | SARS-CoV-2 Negative | Total |
|----------------|---------------------|---------------------|-------|
| All Admissions | 17,075              | 12,879              | 30,754|
| No Cultures Collected | 169 (2.9%)         | 10,080 (16.9%)     | 10,249(74.8%) |
| Total Cultures Collected | 16,705 (97.1%)   | 5,339 (8.1%)       | 22,044(100%) |
| Culture Positive for Bacteria, fungal or non-COVID virus | 3,487 (20.9%)     | 24,539 (21.4%)     | 27,026(21.3%) |
| Overall LOS (mean ± SD, median days) | 8.7 ± 3.9 (6) | 5.3 ± 4.0 (3) | 5.5 ± 4.0 (3) |
| Hospital LOS among culture positive for co-pathogens (median ± SD, median days) | 13.8 ± 16.1 (9) | 8.3 ± 11.8 (5) | 9.0 ± 12.6 (6) |
| Hospital LOS among culture negative for co-pathogens (median ± SD, median days) | 7.5 ± 11.7 (5) | 4.6 ± 8.1 (4) | 4.9 ± 8.9 (4) |

Table 2: Co-pathogen identified by SARS-CoV-2 status

| Pathogen Type | SARS-CoV-2 Positive | SARS-CoV-2 Negative | Total |
|---------------|---------------------|---------------------|-------|
| Total Pathogens* | 4,067               | 48,016              | 52,083|
| Gram positive | 2,080 (51.5%)       | 17,723 (36.9%)      | 19,803(38.9%) |
| Staphylococcus aureus | 746 (17.9%)       | 6,710 (20.9%)      | 7,456(16.7%) |
| Enterococcus spp | 575 (16.2%)       | 4,032 (23.4%)      | 4,607(23.4%) |
| Streptococcus pneumonia | 99 (8.8%)       | 546 (22.6%)       | 645(19.1%) |
| Gram negative | 2,701 (64.2%)       | 21,710 (45.2%)      | 24,411(47.8%) |
| Enterobacteriaceae | 1,860 (66.6%)       | 14,128 (51.5%)      | 16,988(55.2%) |
| Pseudomonas aeruginosa | 410 (17.4%)       | 2,481 (11.4%)      | 2,891(11.4%) |
| Acinetobacter baumannii | 27 (1.0%)       | 362 (6.8%)         | 389(1.8%) |
| Fusobacterium | 483 (80.0%)         | 2,245 (51.5%)       | 2,728(54.8%) |
| Candida spp | 360 (75.0%)         | 1,657 (37.8%)       | 2,017(39.3%) |
| Aspergillus spp | 6 (1.1%)           | 125 (2.8%)         | 131(2.8%) |
| Non-COVID-19 Virus | 599 (0.9%)       | 5,908 (12.3%)      | 6,507(12.0%) |

* Including isolate detected; there are 10 source and pathogens in the same patient admission

Conclusion: There were similar rates of positive pathogen identification among SARS-CoV-2 test positive and negative patients, which might highlight similarities in clinical presentation. However, SARS-CoV-2 positive patients had longer hospital LOS and LOS increased with positive culture. Sources of infection and pathogens varied based on a positive or negative SARS-CoV-2 result. Identifying likely causative pathogens of co-infections in the era of SARS-CoV-2 is critical for treatment optimization.

Disclosures: Laura A. Puzniak, PhD, Merck (Employee) Lyn Finelli, DrPH, MS, Merck & Co Inc, (Employee) Karri A. Bauer, PharmD, Merck Research Laboratories (Employee) Pamela Moore, PharmD, Merck & Co Inc, (Employee) Carolyn Yu, MD, Becton, Dickinson and Company (Employee)GluaxonSmithKline plc., (Other Financial or Material Support, Funding) Alvin You, MD, Becton, Dickinson and Company (Employee) GlaxonSmithKline plc., (Other Financial or Material Support, Funding) Laura A. Puzniak, PhD, Merck (Employee) Lyn Finelli, DrPH, MS, Merck & Co Inc, (Employee) Karri A. Bauer, PharmD, Merck Research Laboratories (Employee) Pamela Moore, PharmD, Merck & Co Inc, (Employee) Carolyn Yu, MD, Becton, Dickinson and Company (Employee)GluaxonSmithKline plc., (Other Financial or Material Support, Funding) Laura A. Puzniak, PhD, Merck (Employee) Lyn Finelli, DrPH, MS, Merck & Co Inc, (Employee) Karri A. Bauer, PharmD, Merck Research Laboratories (Employee) Pamela Moore, PharmD, Merck & Co Inc, (Employee) Carolyn Yu, MD, Becton, Dickinson and Company (Employee)GluaxonSmithKline plc., (Other Financial or Material Support, Funding) Laura A. Puzniak, PhD, Merck (Employee) Lyn Finelli, DrPH, MS, Merck & Co Inc, (Employee) Karri A. Bauer, PharmD, Merck Research Laboratories (Employee) Pamela Moore, PharmD, Merck & Co Inc, (Employee) Carolyn Yu, MD, Becton, Dickinson and Company (Employee)GluaxonSmithKline plc., (Other Financial or Material Support, Funding)

37.5 COVID-19 infection in a Massachusetts community hospital. Raul Davaro, Dr 2; ayburn rapose, md 3; reliant medical group, worcester, Massachusetts

Session: P-12. COVID-19 Complications, Co-infections, and Clinical Outcomes

Background: The ongoing pandemic of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infections has led to 105,690 cases and 7,647 deaths in Massachusetts as of June 16.

Methods: The study was conducted at Saint Vincent Hospital, an academic health care center in Worcester, Massachusetts. The institutional review board approved this case series as minimal-risk research using data collected for routine clinical practice and waived the requirement for informed consent. All consecutive patients who were sufficiently medically ill to require hospital admission with confirmed severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection by positive polymerase chain reaction testing of a nasopharyngeal sample were included.

Results: A total of 109 consecutive patients with COVID-19 were admitted between March 15 and May 31. Sixty one percent were men, the mean age of the cohort was 67. Forty one patients (37%) were transferred from nursing homes. Twenty seven patients died (24%) and the majority of the dead patients were men (62%). Fifty one patients (46%) required admission to the medical intensive care unit and 34 necessitated mechanical ventilation, twenty two patients on mechanical ventilation died (63%). The most common co-morbidities were essential hypertension (65%), obesity (60%), diabetes (33%), chronic kidney disease (22%), morbid obesity (11%), congestive heart failure (16%) and COPD (14%). Five patients required hemodialysis. Fifty five patients required endotracheal intubation and 8 required mechanical ventilation.

Conclusion: Nosocomial and ventilator-associated pneumonia were commonly seen among hospitalized patients with COVID-19 requiring intubation and intensive care use admission. With complications of bacterial pneumonia common among critically ill patients infected with SARS-CoV-2, widespread antimicrobial usage may increase the selective pressure for antibiotic resistance in this patient population.

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