Waterford: Antimicrobial Guidelines - Antimicrobial Guideline: CAP and COVID-19

CAP and COVID-19

General points

Inappropriate antibiotic use may reduce availability if used indiscriminately, and broad-spectrum antibiotics in particular may lead to *Clostridioides difficile* infection and antimicrobial resistance.

Send investigations: eg. Swab for SARS CoV2-RNA, blood and sputum cultures, pneumococcal +/- legionella urinary antigens, CXR, FBC.

Differentiating between COVID-19 pneumonia and bacterial pneumonia on clinical features alone can be difficult.

Note many patients with COVID-19 may have a high CRP which does not by itself indicate the presence of a bacterial infection.

As COVID -19 is a viral infection antibiotics are ineffective unless there is a bacterial co-infection which is thought to be uncommon (<10%). The risk of bacterial co-infection is likely increased in those requiring critical care and may present later in hospital as HAP or VAP.

The following features may indicate the presence of bacterial pneumonia:

- Characteristic symptoms such as purulent sputum or pleuritic chest pain,
- Localised chest findings on clinical exam
- Lobar consolidation on CXR
- Neutrophilia

For the use of anti-viral and other agents in the treatment of COVID-19, please see most recent HSE Drugs Management Programme COVID 19 Guidelines and Protocols.

Antibiotics in CAP and suspected/proven COVID-19

The following guidance from the HSE may be of use when deciding when to start antibiotics in these patients:

1. No purulent sputum and no evidence of pneumonia:
   - Do not prescribe antibiotics for the treatment of secondary bacterial pneumonia.
1. Purulent sputum AND one of bronchitis/pneumonia (CURB 0-2) OR if known underlying lung disease where patient has a history of secondary bacterial infection in winter months:
   - First Line: **Doxycycline** 200mg on day 1 then 100mg once daily for 5 days in total.
   - Alternative: **Amoxicillin** 500mg TDS PO for 5 days.
1. Severe CAP (CURB 3-5): See CAP guideline.

Review previous microbiology test results for history of respiratory tract colonisation or infection with *Pseudomonas aeruginosa* or MDROs such as MRSA.

In patients with immunosuppression or severe underlying lung disease use HAP (>5 days in hospital) guideline.

Review all antibiotics following SARS CoV-2 RNA test result and/or at 24-48 hours.

If following appropriate investigations there is no evidence of secondary bacterial infection, empirical antibiotics can be stopped.

References

1. Antimicrobial Stewardship and COVID-19. HPSC 24th April 2020
2. Advice to antimicrobial management teams on antimicrobial prescribing in suspected lower respiratory tract infections in the context of the COVID-19 pandemic. Healthcare Improvement Scotland. SAPG 12th May 2020.

   COVID-19 rapid guideline: managing suspected or confirmed pneumonia in adults in the community. NICE guideline [NG165] Published date: 03 April 2020 Last updated: 23 April 2020.