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Abstract

Using Risk Assessments in Antibiotic Usage during the COVID-19 Era

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Abstract:

Statement of the Problem: In everyday language, risk refers to circumstances in which it is uncertain, although possible, that some adverse event occurs. But when it comes to COVID-19, what is the risk that we are talking about? How can we measure risk in the context of Covid-19? Are there risks in taking antimicrobials for COVID-19? If so, what are these risks? Antimicrobials have enabled medical advancements over several decades, but the continuous emergence of resistance to antimicrobials compromises treatment to various diseases and threatens the progress in health.1-2 COVID-19 is caused by the SARS-CoV-2 virus, which has infected more than 4 million people with 278 892 deaths worldwide as of 11 May 2020. COVID-19, which can manifest as a severe respiratory infection, has been declared as a public health emergency of international concern and is being treated with a variety of antimicrobials.3 During the current pandemic there are potential threats that could affect antimicrobial stewardship activities and drive antimicrobial resistance.

Methodology: The basic principles behind a risk management process are presented and data gathered during this exercise can be used in other scenarios, for example, in running a risk assessment exercise within the Covid-19 context. A thorough literature review evaluating the current evidence with respect to antibiotics used in COVID-19 is put forward. Risks in antibiotic usage are emphasized. Findings: The advice on Covid-19 being drawn up by the European Center for Disease Prevention and Control, World Health Organization and health authorities to the general public is a continuous assessment of risk and benefits. Risk assessment analysis is a systematic approach and a rational solution to problem identification and probability determination (Table 1).4 The overall risk, be it to determine the risk of virus transmission, or the risk of using antimicrobials within a COVID-19 context, is determined by a combination of risk of the probability of an event occurring and of its consequences (impact) to individuals or the population. Conclusion & Significance: Being able to reliably identify the risk of disease and progression, in which infected patients with COVID-19 will develop severe disease, could help clinicians in risk stratifying and prioritizing patients and ensuring appropriate care.

Biography:

Maresca Attard Pizzuto studied Pharmacy at the University of Malta, Faculty of Medicine and Surgery and graduated in 2008 and obtained her Ph.D. Degree in 2016. Her research work was related to risk and risk management in various pharmaceutical processes, and evaluated ways how risk in different pharmaceutical settings can be measured. Her work was presented in a number of conferences including the European Association of Faculties of Pharmacy, the European Association of Hospital Pharmacists, the International Pharmaceutical Federation and the American College of Clinical Pharmacy. Dr Attard Pizzuto is an academic at the Department of Pharmacy, University of Malta and her lecturing portfolio extends from applied pharmaceutical science to pharmaceutics, pharmaceutical regulatory science and drug information and statistics. She is also involved in the supervision of a number of undergraduate and postgraduate pharmacy students.

Recent Publications:

1. Public perception of generic medicines in Malta
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Webinar on Antibiotics, December 11, 2020, Paris, France.

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