

Prevention of antimicrobial resistance – is it possible?

Without much fanfare and shadowed by Covid 19 many of us did not realise that we had the 4th pandemic which was the Post Antibiotics ERA 2019. The global burden associated with drug-resistant infections assessed across 88 pathogens and drug combinations cost in 2019 was an estimated 4.95 million. A staggering 1.27 million deaths were directly attributable to drug resistance.

With that in mind, is broad spectrum antibiotics necessary all the time? Studies have shown initial antimicrobial therapy that is too broad is associated with poor outcomes. Not only that, broad-spectrum antibiotic treatment has been associated with an increased mortality risk.

Duration also matters in the treatment of infection. Risk of new resistance emergence increases for each day of additional exposure to antipseudomonal β -lactam antibiotics

However, haematology patients and hematopoietic stem cell transplantation recipients undergoing intensive myelosuppressive/ immunosuppressive treatment are at high risk for severe, life-threatening, bacterial infections. 13 – 60% of HSCT recipients develop BSI, which are associated with 12 – 42% mortality.

What are the evidence to support stopping antibiotics when patient is stable despite still febrile/afebrile neutropenia? What factors influence empiric antibiotic choice? Most importantly are the risk factors for infection with resistant bacteria and risk factors for a complicated clinical course.

They are some challenges when implementing ECIL 4 guidelines and here we will see some solutions in the other studies for example the How long trial and antibiostop therapy to name a few in guiding us.

With this and some old fashioned antibiotic stewardship, it is my hope, antimicrobial resistance can be delayed or even prevented.