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Editorial

Role of Microbiologists in Intensive Care Unit

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EDITORIAL

We live in a time when microbial diseases and treatment resistance among microorganisms are both evolving. With severely sick patients under their direct care in any hospital facility, intensivists serve a key role. The majorities of critically sick patients are either have a microorganism on their person at the time of admission or acquire one through healthcare-associated infections during their stay in the intensive care unit. It is consequently critical for intensivists to have a solid understanding of clinical microbiology. On the flip side, most clinicians have just rudimentary and sporadic expertise from their college years. This information is more theoretical than practical, and it deteriorates over time, becoming ineffective in intensive patient care. As a result, we plan to go through key topics in applied microbiology and infection management that intensivists should be familiar with and use in their daily clinical practise. A clinical microbiologist's assistance is useful in regions of the hospital where the bulk of infections occur. The best examples of this scenario are intensive care and critical units, where patients are exposed to a mix of community-acquired illnesses, healthcare-acquired infections, highly contagious infections, and outbreaks. Clinical microbiology has progressed beyond laboratory bench reporting to active participation with clinicians in antibiotic prescriptions for infections, infectious illnesses, and infection control. Active case discussions, knowledge sharing, comprehending diagnostic testing, awareness of drug resistance trends, and rapid outbreak detection are just a few of the areas where collaboration between an intensivist and a clinical microbiologist would be extremely beneficial to patient care. A microbiologist's main responsibility also includes interacting with intensivists to alert them to changes in pathogen trends, susceptibility patterns, and the evolution of atypical isolates, among other things. They should talk about the effectiveness of newer FDA-approved antimicrobial medicines in treating complex illnesses. For newer drugs, in vitro susceptibility testing should be conducted, and the susceptibility pattern should be communicated to clinicians. The clinician must decide if they are beneficial in therapy based on susceptibility pattern and pharmacodynamics. Meetings with clinicians on a regular basis can help to make these innovations possible. This procedure is advised in ICUs to ensure antimicrobial stewardship. When dealing with an illness, having a good understanding of the usual flora/microbiota in the infection site will aid in selecting antibiotics that will target the most likely microorganisms. Infections at specific places are usually often produced by local flora; but, rare instances such melioidosis, cutaneous anthrax, tetanus, gas gangrene, sporotrichosis, and zygomycosis are linked to trauma or injection with an infectious pathogen from the environment. Rare isolates are intriguing because they make clinical and laboratory diagnosis difficult. The first and most important thing to understand is that empiric therapy does not target most unusual/exotic infections. Empiric antibiotics are designed to treat commonly isolated germs while ignoring those that aren't. As the teamwork often surpasses individual efforts, each physician, intensivist, and microbiological plays a critical role in the prevention of infections in ICUs. The practical application of these ideas, however difficult, necessitates perseverance with the only purpose of improving patient care.

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