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Editorial

THROUGH THE ANTIBIOTIC MAZE: HOW TO FIND THE RIGHT WAY ?

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In the current medical literature, we are continuously exposed to new antibiotics. The pharmaceutical industry is active in the manufacture and marketing of completely new agents. How can we select in a logical and scientific way among all these drugs? What criteria should we use to treat our patients adequately?

Before going into these issues one must ask a more basic question; do we need the drug manufacturers to continuously flood the market with new agents for treating infections? It is clear that the morbidity and mortality of infectious diseases is still high. As more treatment modalities are becoming available through surgery, transplantation and with improvement in preventive and therapeutic management of medical problems, we are noticing a significant increase in the number of patients who are at an increased risk of developing serious infections; the "compromised host". During hospital rounds almost every other patient belongs to this broad category; the child with bronchial asthma, the young man with sickle cell disease, the diabetic lady on insulin or the obese man with chronic lung disease. The more obvious "immuno-compromised host" is also more likely to survive longer and be under risk of acquiring overwhelming infections. Together with the increasing population of more susceptible patients, the organisms causing serious infections are becoming more resistant to conventional therapy. Gram negative bacilli that are responsible for nosocomial infections are acquiring increased resistance to antibiotics, methicillin - resistant Staphylococcus aureus, is causing more hospital - acquired infections and penicillin - resistant Streptococcus pneumoniae is isolated more frequently from patients all over the world. Factors in the patient's surroundings such as the increase in international travel with its risks of certain infectious agents spreading more easily from small isolated communities to the rest of the world and the

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overcrowding in the community and in health care facilities encourage the spread of organisms that might be highly resistant to antibiotic therapy to a more susceptible patient population.

So, the answer to whether we need new antibiotics is a definite Yes. With this statement, however, a strong word of caution needs to be emphasised. It is particularly because of all the reasons that justify the introduction of new antibiotics that we must be extremely careful in our method of using them. The use of potent antibacterial agents to empirically treat patients with either viral infections or with infections that are known to respond to more conventional "old" antibiotics should stop. Selection of the appropriate antibiotic to treat a particular patient with a specific infection should be based on a sound reasoning process. One must not fall into the temptation to use a new and potent antibacterial agent just because it was promoted in a scientific meeting or during a pharmaceutical

promotional campaign. The decision should be made after reviewing established evidence of efficacy, keeping in mind specific advantages in the pharmacological properties of the drug, ease of administration, the lack of serious side effects, cost of the drug and the effect of the drug on the ecology of our microbial micro flora. An important question that needs to be answered also is what specific advantages are there in using the new agent as compared to drugs that have been in use for a long time.

One should remember, as a colleague Professor of Pharmacology always says, that an old friend is always better than a new acquaintance.