**Antibiotic Resistance in Present Era**

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The antibiotics are an essential group of therapeutic drugs used to kill bacteria on various levels in the human body. These antibiotics had played a significant role for the treatment as well as the prevention of bacterial infections. The effectiveness of antibiotics against bacterial infections cannot be denied. However, an overuse and misuse of antibiotics, the current poor hygiene and contamination control mechanisms have lead to the improvement of antibiotic resistance.

Anti-microbial or antibiotic resistance is an international public health issue, greatly dominant in the developing countries. Antibiotic resistance is a bacterial adaptation, which allows bacteria to persist regardless of the presence of antibiotics. Antibiotic resistance is a significant risk to human health and is being seen as a global environmental and economic risk. The relationship between bacterial resistance and misuse of antibiotics had been well documented, and was considered to be a major public health problem.

Antibiotics are important to treat the bacterial infections but inaccurately prescription, misuse and overuse of antibiotics are elevating the antibiotic resistance. It is still a significant health problem in developing countries where not many hospitals have facilities for microbiology of clinical isolates which can assign to blind treatment. Change in the bacteriological profile due indiscriminate use of antibiotics has been associated with the appearance of multiple drug resistance strains. Information regarding the antibiotic susceptibility profile is essential in the selection of the most appropriate treatment and can minimize the antibiotic resistance.

Preventive measures should be implemented in true sense to control antibiotic resistance. “Cleanliness is next to Godliness” and hence, clean surroundings as well as clean hands should be ensured. Soaps should be used for hand washing frequently. Awareness campaigns should be promoted and self-medication should be avoided. Antibiotic susceptibility investigations should be carried out for suspected bacterial infections.