AIMS AND OBJECTIVES

The availability of a plethora of antibiotics over the past decades has caused complacency about the threat of anti-microbial resistance. The extensive and indiscriminant use of antibiotics in the community and hospitals has fueled a major antibiotic resistance crisis, where the resistance is appearing within a short time after introduction of a new antibiotic. Beta-lactam group of antibiotics is the commonest group of antibiotic used and the commonest cause of bacterial resistance to beta-lactam anti-microbial agents is by production of beta-lactamases. Worldwide, there is a realization regarding this and wide-spread research activities are taking place. In India, there is scanty knowledge and information of the extent of beta-lactamase production and about the reservoirs of the antibiotic resistance. In Kolkata, there has been very little research undertaken in this connection.

The aim of the present work is to find the trends of antibiotic resistance in hospitals of Kolkata and the objectives of the present investigation are to determine the following:

I. Antibiotic resistance pattern of bacterial isolates from different hospitals of Kolkata.

II. Detection of beta lactamase production by these clinical isolates.

III. Characterization and classification of these beta lactamases.

IV. To look at the genetic basis of beta-lactam resistance.