

CHAPTER 5

CONCLUSION

Sensitivity testing of bacteria isolated from clinical specimens is carried out on an enormous scale all over the world. The most common method of determining the sensitivity of the organisms is the measuring the zone of inhibition around a disk containing the antibiotic - the disk diffusion method; this is crudely quantitative. Some laboratories, the MIC dilution methods - agar dilution method and broth dilution method - are determined more accurately by the use of media in which known amounts of the antibiotic have been incorporated.

This study, the modified broth disk method was introduced to study in comparison with disk diffusion method using local and BBL disks. Also the two MIC dilution methods were tests to find the agreements in all method.

The present study demonstrated that

1. The modified broth disk method of which was devised mainly to give rapid sensitivity results especially in case of fulminately infections. The results of modified broth disk method, as compared with those obtained using disk diffusion method, demonstrated that this modified broth disk method can be applied as a rapid antimicrobial susceptibility

test of which the sensitivity results can be obtained in about 6 hrs. after incubation in testing E. coli, Salmonella sp., Shigella sp., V. cholerae and V. parahaemolyticus against TC, CM, CL, CO, PN, PM, AM and also can be applied to V. parahaemolyticus, Shigella sp., and E. coli tested against NM, KM, and GM respectively. This can offer a potential advantage to the interested clinicians in earlier choice of appropriate antibiotic for the treatment.

2. The percentage susceptibility results obtained using the BBL disks and local disks as determined by disk diffusin and modified broth disk method demonstrated that although, nearly half of the total numbers of results, obtained comparing the percentage susceptibility achieved using the two disks, showed the equal percentage susceptibility obtained using both disks. However, forty percent of the total numbers of results demonstrated the higher percent susceptibility obtained using BBL disks than local disks. Due to the cheaper cost of local disk, it can be note to provide more local production facilities in order to achieve a local standard disk to serve all local clinical laboratories. This will certainly help decreasing the expenditure in laboratories.

3. The MIC value obtained testing agar dilution and broth dilution method were quite related. The MIC's and the cumulative percentage susceptibility obtained will facilitate the calculation of administrative dosage adequately kill the sensitive organisms in vivo. The clinicians are able to correlate these values with serum levels of antibiotic achievable in patients following various doses given by the various routes of administration.