# Summary and conclusion

The incidence and prevalence of VRE colonization, either clinically evident or latent however, vary widely among hospitals ***(Lancaster, 1994)***.

First identified in 1988, VRE has rapidly become one of the leading causes of nosocomial infection and major growing problems in health care facilities globally ***(Hendrix et al., 2001).***

This study aimed to detect colonization with VRE among patients admitted to various wards of Benha University Hospital, determine antimicrobial susceptibility pattern for the isolated enterococci and genotyping of the VRE isolates.

This study was conducted on 80 patients admitted to various wards of Benha University Hospital. Their age ranged from days to 80 years. They were 39 males (48.8%) and 41 females (51.2%). Stool samples were collected from the patients and 77 enterococcal isolates were isolated.

Antimicrobial susceptibility test by disc diffusion method was done for all enterococcal isolates (including vancomycin). Vancomycin susceptibility was done also for all enterococcal isolates by agar screening method and confirmed by broth dilution methods. Out of 77 enterococcal isolates, 3(4%) cases were diagnosed as VRE by disc diffusion method. By agar screen and broth dilution methods, 2 additional cases were diagnosed as VRE. So in this study 5 (6.5%) cases out of 77 were diagnosed as VRE.

Real time PCR technique was used to detect *van*A and *van*B genes in the isolated VRE strains; *van*A was detected in 4 isolates while *van*B was detected in one isolates.

Studying various factors for colonization with VRE revealed that the most significant risk factor were the recurrent use of vancomycin in treatment and leukemia. There were no significant association between vancomycin resistance and each of age, sex of patients, previous hospitalization, duration of hospitalization, administration of cephalosporins and high risk diseases like renal failure, diabetes.