COMPARISON OF THREE SKIN DISINFECTANT SOLUTIONS USED FOR SKIN PREPARATION PRIOR TO SPINAL AND EPIDURAL ANAESTHETIC PROCEDURES IN PARTURIENTS AT DE SOYZA MATERNITY HOSPITAL AND CASTLE STREET HOSPITAL FOR WOMEN.

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Background

Effective skin disinfection before spinal and epidural anaesthesia is essential to avoid bacterial infection. Three disinfectants, Betadine, Cetavlon and a combination of Chlorhexidine, Cetrimide and Isopropyl alcohol are used in hospitals as skin disinfectant solutions. We compared the ability of these disinfectant solutions to reduce the bacterial skin flora prior to anaesthetic procedures.

Method

80 Pregnant women admitted to CSHW and DMH who received epidural or spinal anaesthesia were studied. They were randomly assigned to receive skin preparation with Betadine, Cetavlon and the combined preparation. Two cultures were obtained from each subject; just prior to skin disinfection and immediately following disinfection. In use test was performed to determine bacterial contamination of newly opened and multiple used bottles from each group.

Results

The reduction in bacterial colony forming units (CFU) following application of disinfectant in all three groups were significant. ($p < 0.05$) The reduction of bacterial CFU following skin preparation between the three groups was tested by one way ANOVA and found to be significant. ($P=0.018$) Pair wise comparison among reduction of skin flora by antiseptics showed highest reduction with use of the combined preparation. None of the samples of disinfectants obtained from newly opened and multiple used bottles of antiseptics were contaminated.

Conclusion

The combined preparation consisting of Chlorhexidine, Cetrimide and Iso propyl alcohol showed the best reduction of skin flora followed by Cetavlon and Betadine.