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Prospective evaluation of 2% (w/v) alcoholic chlorhexidine gluconate as an antiseptic agent for blood donor arm preparation.

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Abstract

AIM: A prospective study was undertaken to evaluate the use of 2% (w/v) alcoholic chlorhexidine gluconate (2% AlcCHG) in donor arm preparation, to monitor the contamination rate of blood products after the collection and to find incidence of transfusion associated bacteremia.

SETTINGS AND DESIGN: Optimal skin antisepsis of the phlebotomy site is essential to minimize the risk of contamination. Food and Drug Administration (FDA) in India has recommended antisepsis with three-step regimen of spirit-10% povidone iodine-spirit for donor arm antisepsis, but not with chlorhexidine, which is recommended by many other authors.

MATERIAL AND METHODS: A total of 795 donors were studied from July 2011 to January 2012. Spirit-10% povidone iodine-spirit was used for 398 donors and 2% AlcCHG was used for 397 donors with the two-step method for arm antisepsis. Swabs were collected before and after use of antiseptic agents for all the donors. All the blood products collected from donors with growth in post-antisepsis swabs were cultured. A total of 123 various blood products were cultured irrespective of the method and result of antisepsis was observed. A total of seven patients had mild transfusion reaction. The transfused blood products, blood and urine specimen of the patients who had transfusion reaction were also cultured.

RESULTS: Seven donors out of 398 donors had growth in post-antisepsis swab with spirit-10% povidone iodine-spirit protocol and three donors out of 397 donors had growth in post-antisepsis swab with 2% AlcCHG protocol. All blood products collected from donors who had growth in post-antisepsis swabs when cultured had no growth. There was no contamination of blood products.

CONCLUSIONS: Two percent (w/v) alcoholic chlorhexidine gluconate with two-step protocol can be used as an antiseptic agent for donor arm preparation without considerable cost difference. It is at par with spirit 10% povidone iodine spirit protocol as suggested by FDA in India. There was no reported transfusion associated bacteremia in the study period.

KEYWORDS: Bacteremia; blood donor arm; chlorhexidine gluconate