

Inactivation of human viruses by povidone-iodine in comparison with other antiseptics.

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Abstract

Inactivation of a range of viruses, such as adeno-, mumps, rota-, polio- (types 1 and 3), coxsackie-, rhino-, herpes simplex, rubella, measles, influenza and human immunodeficiency viruses, by povidone-iodine (PVP-I) and other commercially available antiseptics in Japan was studied in accordance with the standardized protocol in vitro. In these experiments, antiseptics such as PVP-I solution, PVP-I gargle, PVP-I cream, chlorhexidine gluconate, alkyldiaminoethyl-glycine hydrochloride, benzalkonium chloride (BAC) and benzethonium chloride (BEC) were used. PVP-I was effective against all the virus species tested. PVP-I drug products, which were examined in these experiments, inactivated all the viruses within a short period of time. Rubella, measles, mumps viruses and HIV were sensitive to all of the antiseptics, and rotavirus was inactivated by BAC and BEC, while adeno-, polio- and rhinoviruses did not respond to the other antiseptics. PVP-I had a wider virucidal spectrum, covering both enveloped and nonenveloped viruses, than the other commercially available antiseptics.

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