

Hand Sanitizer: A Savoir or Poison

Satesh Kumar*

4th year MBBS student, Shaheed Mohtarma Benazir Bhutto Medical College Lyari, Pakistan

*Corresponding author: Satesh Kumar, 4th year MBBS student, Shaheed Mohtarma Benazir Bhutto Medical College Lyari, Karachi, Pakistan



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ABSTRACT

Hand sanitizer also called antiseptic is a liquid or Gel type substance needed to kill various different germs including bacteria and viruses present on our external body surfaces. Hand hygiene is the single most important factor needed to control the spread of many contagious diseases. Routine hand hygiene with hand sanitizers is the single most effective way to prevent infections, especially in health care settings. Despite a lot of beneficial effects in daily life, it is not completely free of shortcomings. It is known to cause antibiotic resistance, dry skin, unsafe if ingested, and potential alternatives for alcohol abusers.

Editorial

Infectious diseases can spread from one person to another with contaminated hands. Therefore, Hand hygiene is one of the most important things needed today to prevent the spread of infectious diseases such as viruses or bacteria. The most widely used methods to prevent these infections are washing hands with soap and water or using alcohol-based sanitizers. Sanitizers may vary in their composition. According to World Health Organization [1], alcohol-based sanitizers are most effective compared to other methods of hand hygiene. Two formulations have been suggested to locally produce these products. One formulation includes (ethanol 96%, hydrogen peroxide 3%, glycerol 98%, and sterile distilled or boiled cold water) and formulation includes (Isopropyl alcohol 99.8%, hydrogen peroxide 3%, glycerol 98%, and sterile distilled or boiled cold water). Due to the presence of a significant amount of alcohol, these may be used as a substitute by alcohol abusers.

In accordance with the Centers for Disease Control and Prevention, alcohol-based sanitizers are only effective if they contain at least 60% alcohol [2]. A 2013 study suggested; for high-risk individuals, ethanol-based sanitizers may be a substance of abuse and their access should be limited. However ethanol-based sanitizers were not considered as primary alternatives

in alcoholics [3]. A 2015 study reported 385 total cases of hand sanitizer ingestion; 61% unintentional, 18% intentional misuse, and 10% miscellaneous. Most of them were younger males (potent abusers). However serious outcomes were not reported and cases were managed favorably [4]. In 2019 a case was reported in the New England Journal of Medicine, in which a 54-year-old man undergoing alcohol withdrawal ingested hand sanitizer (which contained 63% isopropanol) had access to hand sanitizer at his bedside which is commonly provided in health care settings for hygiene purposes [5].

In 2021 another case in Cureus journal was reported in which a 30-year-old male patient with alcohol use disorder was found intoxicated who was subsequently owning several bottles of sanitizers which gave a clue of his potential intoxication and withdrawal symptoms later. Therefore possible intervention should be applied in using these alcohol-based products in health care settings and their use should be limited for potential abusers. Hand sanitizers are the preferred way of protecting ourselves from the spread of such contagious diseases but steps should be taken to minimize their use as the potential choice of abuse. Washing hands with soap and water is the best alternative available for potential abusers as well as in health care settings.

Declarations

All manuscripts must contain the following sections under the heading 'Declarations':

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