FDA Drug Safety Communication: FDA warns about rare but serious allergic reactions with the skin antiseptic chlorhexidine gluconate

[2-2-2017]

Safety Announcement

The U.S. Food and Drug Administration (FDA) is warning that rare but serious allergic reactions have been reported with the widely used skin antiseptic products containing chlorhexidine gluconate. Although rare, the number of reports of serious allergic reactions to these products has increased over the last several years. As a result, we are requesting the manufacturers of over-the-counter (OTC) antiseptic products containing chlorhexidine gluconate to add a warning about this risk to the Drug Facts labels (/drugs/information-consumers-drugs/otc-drug-facts-label). Prescription chlorhexidine gluconate mouthwashes and oral chips used for gum disease already contain a warning about the possibility of serious allergic reactions in their labels.

Patients and consumers should stop using the product that contains chlorhexidine gluconate and seek medical attention immediately or call 911 if they experience symptoms of a serious allergic reaction. These reactions can occur within minutes of exposure. Symptoms include wheezing or difficulty breathing; swelling of the face; hives that can quickly progress to more serious symptoms; severe rash; or shock, which is a life-threatening condition that occurs when the body is not getting enough blood flow.

Health care professionals should always ask patients if they have ever had an allergic reaction to any antiseptic before recommending or prescribing a chlorhexidine gluconate product. Advise patients to seek immediate medical attention if they experience any symptoms of an allergic reaction when using the products. Consider using alternative antiseptics such as povidone-iodine, alcohols, benzalkonium chloride, benzethonium chloride, or parachlorometaxylenol (PCMX) when any previous allergy to chlorhexidine gluconate is documented or suspected.

Chlorhexidine gluconate is mainly available in OTC products to clean and prepare the skin before surgery and before injections in order to help reduce bacteria that potentially can cause skin infections. These products are available as solutions, washes, sponges, and swabs and under many different brand names and as generics (see Facts about Chlorhexidine Gluconate). Chlorhexidine gluconate is also available as a prescription mouthwash to treat gingivitis and as a prescription oral chip to treat periodontal disease. In 1998, we issued a Public Health Notice to warn health care professionals about the risk of serious allergic reactions with medical devices such as dressings and intravenous lines that contain chlorhexidine gluconate.

We identified 52 cases of anaphylaxis, a severe form of allergic reaction, with the use of chlorhexidine gluconate products applied to the skin. In the 46 years between January 1969 and early June 2015, FDA received reports of 43 cases worldwide.* More than half of the 43 cases were reported after 2010, and after our 1998 Public Health Notice. This number includes only reports submitted to FDA, so there are likely additional cases about which we are unaware. The serious allergic reaction cases reported outcomes that required emergency department visits or hospitalizations to receive drug and other medical treatments. These allergic reactions resulted in two deaths. Eight additional cases of anaphylaxis were published in the medical literature between 1971 and 2015,[1-3] and one case was identified in the National Electronic Injury Surveillance System-Cooperative Adverse Drug Event Surveillance (NEISS-CADES) database (http://www.healthindicators.gov/Resources/DataSources/NEISS-CADES_86/Profile) between 2004 and 2013.

We urge patients, consumers, and health care professionals to report side effects involving chlorhexidine gluconate or other medicines to the FDA MedWatch program, using the information in the "Contact FDA" box at the bottom of the page.

*The cases were reported to the FDA Adverse Event Reporting System (FAERS) (/fda-adverse-event-reporting-system-faers).

Facts about Chlorhexidine Gluconate

- Chlorhexidine gluconate is a widely used antiseptic. It is mainly available in over-the-counter (OTC) products used to clean and prepare the skin before surgery and before injections in order to help reduce bacteria that potentially can cause skin infections.
- The OTC products are available as topical solutions, washes, sponges, and swabs. They are marketed under brand names such as Avagard, Bioscrub, Brian Care, CHG Scrub, ChloraPrep, CIDA-Stat, Dyna-Hex, Exidine, Hibiclens, Hibistat, Pharmaseal Scrub Care, and Prevantics. They are also sold as generic products, including through store brands.

- Chlorhexidine gluconate is also available as a prescription oral rinse solution to treat gingivitis. It is marketed under the brand name Peridex as well as many generic brands such as Periogard, Oris, PerioRx, and Paroex.
- Chlorhexidine gluconate is also available as a prescription oral chip under the brand name Periochip, which is inserted between the gums and teeth to treat periodontal disease.
- Some medical devices such as dressings and intravenous lines also contain chlorhexidine gluconate.

Additional Information for Patients and Consumers

- Rare but serious allergic reactions have been reported with the antiseptic chlorhexidine gluconate. These reactions can occur within minutes of exposure.
- Tell your health care professional if you have ever had an allergic reaction to any antiseptics applied to the skin, prescription mouthwashes, or when using a medical device containing chlorhexidine gluconate.
- Stop using the product containing chlorhexidine gluconate and seek medical attention immediately or call 911 if you experience symptoms of a serious allergic reaction such as:
  - Wheezing or difficulty breathing
  - Swelling of the face
  - Hives that can quickly progress to other more serious symptoms
  - Severe rash
  - Shock, which is a life-threatening condition that occurs when the body is not getting enough blood flow
- Talk to your health care professional if you have any questions or concerns about chlorhexidine gluconate.
- Always read the Drug Facts label (/drugs/information-consumers-drugs/otc-drug-facts-label) before using any over-the-counter product and read the patient information leaflet that comes with your prescription.
- Report side effects from chlorhexidine gluconate or other medicines to the FDA MedWatch program, using the information in the "Contact FDA" box at the bottom of this page.

Additional Information for Health Care Professionals

- Rare but serious allergic reactions, including fatal anaphylaxis, have been reported with the antiseptic chlorhexidine gluconate. These reactions can occur within minutes of exposure, and can occur with topical or oral exposure to the drug.
- If a patient exhibits an unexplained allergic reaction prior to or during an injection or surgical procedure, check whether chlorhexidine gluconate was used.
- If you suspect a patient may have (or has had) an allergic reaction to chlorhexidine gluconate, monitor the reaction carefully, provide immediate respiratory and/or cardiovascular support as needed, and discontinue the use of the drug or medical device containing chlorhexidine gluconate as expeditiously as possible.
- Always ask patients if they have ever had a reaction to the ingredient or to antiseptic products prior to using chlorhexidine gluconate.
- Consider using alternative antiseptics such as povidone-iodine, alcohols, benzalkonium chloride, benzethonium chloride, or parachlorometaxylenol (PCMX) when any previous allergy to chlorhexidine gluconate is documented or suspected.
- Report adverse events involving chlorhexidine gluconate to the FDA MedWatch program, using the information in the "Contact FDA" box at the bottom of this page.

Data Summary

We searched for cases of anaphylactic reaction reported with the use of chlorhexidine gluconate topical products in the FDA Adverse Event Reporting System (FAERS) database (/fda-adverse-event-reporting-system-faers), the medical literature, and National Electronic Injury Surveillance System-Cooperative Adverse Drug Event Surveillance (NEISS-CADES) (http://www.healthindicators.gov/Resources/DataSources/NEISS-CADES_86/Profile) data.

We identified 43 worldwide cases reported in FAERS from January 1, 1969, through June 4, 2015, of anaphylactic reaction with the use of chlorhexidine gluconate topical products. Twenty-four of these cases were reported after 2010. All cases were serious: 26 reported the outcome as life-threatening, 12 required hospitalization, and 2 deaths were attributed to the anaphylactic reaction. Hypotension in association with either skin, respiratory, or gastrointestinal allergy symptoms was reported in 39 of the 43 cases. Elevated histamine or tryptase levels were reported in 12 of the cases. All 43 cases had a positive temporal association to use of chlorhexidine gluconate containing products. All cases reported the reaction occurred the same day the product was used, and seven reported a positive allergy rechallenge.

A search of the medical literature between 1971 and 2015 identified eight cases of anaphylactic reaction associated with topical chlorhexidine gluconate that were not reported to FAERS.[1-3] A search of NEISS-CADES between 2004 and 2013 found one case of anaphylaxis in an 11-year-old boy who had a severe reaction after being cleaned with a topical chlorhexidine gluconate solution in a clinic.

References

1. Torricelli R, Wüthrich B. Life-threatening anaphylactic shock due to skin application of chlorhexidine. Clin Exp Allergy 1996;26:112.
2. Conraads VM, Jorens PG, Ebo DG, Claeys MJ, Bosmans JM, Vrints CJ. Coronary artery spasm complicating anaphylaxis secondary to skin disinfectant. Chest 1998;113:1417-9.
3. Okano M, Nomura M, Hata S, Okada N, Sato K, Kitano Y, et al. Anaphylactic symptoms due to chlorhexidine gluconate. Arch Dermatol 1989;125:50-2.

en Español (/drugs/drug-safety-and-availability/la-fda-advierte-acerca-de-reacciones-alergicas-poco-comunes-pero-graves-del-antiseptico-topico-con)

Drug Safety Communication (/media/102986/download) (PDF - 67KB)

Related Information

- FDA Public Health Notice: Potential Hypersensitivity Reactions To Chlorhexidine-Impregnated Medical Devices (https://wayback.archive-it.org/7993/20170111190734/http:/www.fda.gov/MedicalDevices/Safety/AlertsandNotices/PublicHealthNotifications/ucm062306.htm) (http://www.fda.gov/about-fda/website-policies/website-disclaimer)
- OTC Drug Facts Label (/drugs/information-consumers-drugs/otc-drug-facts-label)
- The FDA's Drug Review Process: Ensuring Drugs Are Safe and Effective (/drugs/information-consumers-drugs/fdas-drug-review-process-ensuring-drugs-are-safe-and-effective)
- Think It Through: Managing the Benefits and Risks of Medicines (/drugs/information-consumers-drugs/think-it-through-managing-benefits-and-risks-medicines)