



THE AGA KHAN UNIVERSITY

eCommons@AKU

---

Pharmacy Newsletter

Publications

---

12-2019

## Pharmacy Newsletter : December 2019

Pharmacy Department

Follow this and additional works at: [https://ecommons.aku.edu/pharmacy\\_newsletter](https://ecommons.aku.edu/pharmacy_newsletter)



Part of the [Pharmacy and Pharmaceutical Sciences Commons](#)

---

# PHARMACY

December, 2019 Vol. 31, Issue 03

NEWSLETTER

*Newsletter advisory committee/members of Pharmacy & Therapeutic Committee*

**Editor-in-Chief**

Dr Bushra Jamil,  
Chairperson P & TC

**Editor**

Syed Shamim Raza  
Service Line Chief, Pharmacy Services

**Editorial Staff**

Umer Ali Khan, *Business Manager, Pharmacy Services*

Mohd Amir, *Specialist, Pharmacy Services*

Hafsah M Ashfaq, *Clinical Pharmacist*

Bilal Ahmed, *DPIC Pharmacist*

Faqeeha Shakeel, *DPIC Pharmacist*

**Published by**

Drug & Poison Information Centre  
Pharmacy Services  
Aga Khan University Hospital Stadium  
Road, P.O. box 3500, Karachi 74800,  
Pakistan

Pharmacy Newsletter provides information regarding the decisions of P & TC, current concepts in drug therapy, warnings and cautions issued by various regulatory agencies, drug interactions, ADRs and matters related to drug usage.

Opinions expressed are of authors and does not necessarily represent AKUH's view/recommendations.

Publication of this newsletter has been through an endowment grant from Pharmacist group of Ontario, Canada

**Drug & Poison Information Centre,**

Tel: +92 21 34861504, 1506, 1477, 1479

Email: drug.information@aku.edu

hospital.aku.edu/Karachi/pharmacy

**Inside this Issue:**

FDA Safety Alert | Ranitidine Recall & AKUH Approaches.....Page 1

Truth About Patients with Penicillin Allergies.....Page 1

House Hold Poisoning | How to Keep Your Child Safe.....Page 2

Protective effect of Co-Enzyme Q10 administration on propofol infusion syndrome (PRIS) .....Page 3

Antibiotic Prophylaxis in Animal Bite..Page 3

Role of Vitamin E In Non-Alcoholic Fatty Liver Disease .....Page 4

## FDA Safety Alert | Ranitidine Recall & AKUH Approaches.

The US Food and Drug Administration has learned that some ranitidine medicines, including some products commonly known with the brand-name Zantac, contain a nitrosamine impurity called N-nitrosodimethylamine (NDMA) at low levels.

NDMA is classified as a probable human carcinogen (a substance that could cause cancer). NDMA is a known environmental contaminant found in water and foods, including meats, dairy products and vegetables.

The FDA is assessing whether the low levels of NDMA in ranitidine pose a risk to patients. Information will be updated when it is available. According to the findings by FDA through preliminary testing, ranitidine barely exceeds the amount expected to find in common foods.

**About Ranitidine:** is an H2 (histamine-2) blocker that is an Over the Counter (OTC) and prescription drug.

**AKUH Pharmacy contribution:** Pharmacy proactively informed all the patients who were dispensed ranitidine to stop its use and return them back to pharmacy.

### Recommendations of P&TC:

1. Ranitidine is substituted with oral famotidine (H2 antagonist) in facilities where it is essentially used as a prophylactic approach to reduce and prevent the possible adverse reactions secondary to medication administration.
2. For aspiration prophylaxis in surgical setting omeprazole is suggested, as no intravenous formulation is available for H2 antagonist.

---

## Truth About Patients with Penicillin Allergies

*Faqeeha Shakeel, DPIC Pharmacist*

The report in the Canadian Medical Association Journal (CMAJ) discussed about the misconception of penicillin allergy that 9 out of 10 people have less tolerance to penicillin not allergic to it. And 8 out of 10 people who had penicillin allergy more than decade ago can use penicillin safely now.

Reliable and quickest way to determine whether the patient is allergic to penicillin or not is to consult allergist for testing.

Patients who develop only GI disturbance should not considered as penicillin allergic and can use penicillin. But patients who develop serious allergic reaction that require hospitalization due to rapid-onset hives, anaphylaxis, joint and face swelling, skin blistering are true penicillin allergic and penicillin should not be given to such patients.

Pseudo penicillin allergy is bad for patients and health care system in a sense that patients will get more costly and less effective second line therapy and broad spectrum antibiotic which may lead to more serious infections like methicillin resistance staphylococcus aureus and clostridium difficile.









The authors in a report depreciate the allergy referrals when no allergic testing is done, though that's very cost effective, reliable and fastest way to determine if patient is penicillin allergic or not.

**Reference:** *Us pharmacist; The pharmacist resource for clinical excellence.*

## House Hold Poisoning | How to Keep Your Child Safe

Bilal Ahmad, DPIC Pharmacist

Household poisons are substances in your home that can cause harm when swallowed, inhaled or touched. They include medicines, detergents, cleaning products, toiletries, garden chemicals and other common household products.

Substance (Composition)	Clinical Effects	Comments
Button battery 	Wheezing, drooling, vomiting, coughing, choking, gagging, discomfort. It often lodges in the esophagus causing burns within just 2 hours.	Do not induce vomiting. Foreign body removal. It is actually a 20 mm lithium/zinc coin cell.
Cosmetics (not all), only blushers, foundation & eye shadows. Moisturizers.	Moisturizers cause nausea and vomiting.	Although cosmetics do not cause much harm but mild symptoms need to be treated accordingly.
Crayons (paraffin + waxes + pigments) 	Diarrhea	Some pigments do have lead, caution.
Hand Sanitizers or Perfumes (Ethanol) 	Ataxia, nystagmus, aggressive behavior, nausea, vomiting, flushing. Large ingestions cause coma, respiratory depression, pulmonary aspiration, hypoglycemia, and hypothermia can occur.	A lick of hand sanitizer won't hurt a child or anyone else. Drinking it can cause alcohol poisoning, which can cause low blood sugar, coma, and seizures – though this is not common.
Pencils "lead" 		It's actually graphite, not lead. Professional artist's pencils may contain lead.
Plastics (polystyrene and polyethylene) 	May cause mechanical obstruction.	Inert
Silica gel 	GI mucosal dryness, due to its desiccant nature	Labelled as "don't eat" doesn't mean it's toxic orally. BUT young children can choke on non-toxic products.
Superglue (cyanoacrylate) 	Sticking and local irritation	Transient punctate epithelial keratitis when mistakenly applied to eye.
Thermometers (clinical thermometers contain 1gm elemental mercury, 0.1ml) 	Mild GI irritation, mouth injury due to glass breakage	Also contain 0.3-0.5ml of triethyl phosphate, toluene, xylene and alcohol, but very low amount, non-toxic

### Common Immediate Treatments/ Tips

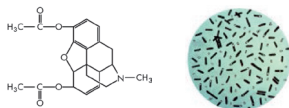
- **Swallowed poison.** Take the item away from the child, and have the child spit out any remaining substance. Do not make your child vomit.
- **Skin poison.** Remove the child's clothes and rinse the skin with lukewarm water for at least 15 minutes.
- **Eye poison.** Flush the child's eye by holding the eyelid open and pouring a steady stream of room temperature water into the inner corner for 15 minutes and bring to the emergency.
- **Poisonous fumes.** Take the child outside or into fresh air immediately. If the child has stopped breathing, start cardiopulmonary resuscitation (CPR) and do not stop until the child breathes on his or her own, or until someone can take over.

#### References:

*Pediatric toxicology; a publication of NPIS London.*

**If you think your child has swallowed something poisonous, call the Drug & Poisons Information Centre on 021-34861504/1506 immediately.**

## ToxTalk | Noo It's not me 😊



A 5 year girl was reported to the drug information with abdominal complains especially diarrhea. The patient was under observation in toxicology team in emergency department to evaluate her for the toxicity of opioids.

**Sign & symptoms:** Diarrhea , no pinpoint pupil, respiratory distress or bradycardia.

**Observations:** All the observed symptoms were inconsistent with opioids overdose like pinpoint pupil and constipation, while the vice versa was seen.

**History:** The little girl drank water from utensil used by her father to clean the syringes: a heroin addict.

**Recommendations:** After an extensive evaluation it was observed that clostridium botulinum; anaerobic gram positive rods which contaminate the addict unhygienic ally used syringes may be the cause gastrointestinal symptom which is botulism.

**Future strategy:** The utensils are reported to be contaminated with clostridium and salmonella etc, preventive measures to be suggested to parents to avoid inadvertent use of pots and related. The patient has to be thoroughly examined to preclude the unnecessary use of Naloxone.

## Protective effect of Co-Enzyme Q10 administration on propofol infusion syndrome (PRIS)

Areeba Nayab, Point of Care Pharmacist

One of the fatal and unusual complications of propofol administration is supposed to be associated with impaired mitochondrial fatty acid beta-oxidation and interference of oxidative phosphorylation.

Common risk factors of this syndrome include administration of catecholamine and glucocorticosteroids, sepsis, and excess body fat.

Structural features of the syndrome consist of cardiac failure, rhabdomyolysis, severe metabolic acidosis and renal failure. High concentrations of propofol infusion treatment ( $\geq 10 \mu\text{g/ml}$ ) for 48 h considerably impaired mitochondrial function, and  $50 \mu\text{g/ml}$  propofol reduced cell viability and elevated lactate concentrations. . Maximum dose of propofol infusion is  $4 \text{ mg/kg/hour}$  for 6 days.

CoQ10 could play a significant role in conferring resistance to propofol cytotoxicity. Propofol becomes merged into the inner mitochondrial membrane where it interferes the electron flow in the respiratory chain mainly at the site of coenzyme Q. Surprisingly this effect could mostly be alleviated by supplementation with coenzyme Q. Suggested CoQ10 oral dosing is 5 to 30 mg/kg daily (in three divided doses) for infants and children, 300 to 1500 mg daily for adolescents, and up to 2400 mg daily for adults.

### References: 1.


Agarwal A, Greene RA, Shea BS. Rapid Onset of Propofol Infusion Syndrome in a Super Morbidly Obese Patient. Ind45. CRITICAL CARE CASE REPORTS: 1 (DON'T) WANT TO BE SEDATED-NEUROCRITICAL CARE, SEDATION, AND DELIRIUM 2018 May(pp).

## Antibiotic Prophylaxis in Animal Bite

Bilal Ahmad, DPIC Pharmacist

Dog and cat bite expose a person to both bacterial (clostridium tetani, aerobes and anaerobes) and viral (Rabies) infections. The post-exposure prophylaxis is achieved via Antibiotics, tetanus vaccine and immunoglobulin along with rabies vaccine and immunoglobulin. The recommended antibiotics and schedule is mentioned below. *Although the use of antibiotic prophylaxis is controversial.*

## ANTIBIOTIC PROPHYLAXIS

<b>Adult</b>	<b>First line:</b> Amoxicillin/clavulanate (Augmentin), 875/125 mg BID <b>Alternative:</b> <b>1.</b> Clindamycin, 300 mg TID plus ciprofloxacin 500 mg BID <b>2.</b> Doxycycline, 100 mg BID <b>3.</b> Penicillin VK, 500 mg QID plus dicloxacillin, 500 mg QID. <b>4.</b> A fluoroquinolone; Cotrimoxazole 160/800 mg BID; or cefuroxime axetil, 500 mg BID plus Metronidazole, 250-500 mg QID, or clindamycin, 300 mg TID. <b>Pregnancy and Penicillin Allergic:</b> <i>Azithromycin 250 to 500 QD</i>	
<b>Pediatrics</b>	<b>First line:</b> Amoxicillin/clavulanate, 25 to 45 mg /kg divided Q12H <b>Alternative:</b> Clindamycin, 10 to 25 mg/kg divided every 6 to 8 Hourly plus Co-trimoxazole, 8 to 10 mg per kg (trimethoprim component) divided every 12 Hourly.	

**Reference:**

link: <https://www.aafp.org/afp/2014/0815/p239.html>

## Role of Vitamin E In Non-Alcoholic Fatty Liver Disease

Samreen Sajjad, Point of Care Pharmacist

NAFLD is the most common cause of cirrhosis now a days. Currently there is no specific treatment or underlying mechanism of this hepatocellular injury. However oxidative stress plays a key role in disease progression. Vitamin E is a fat soluble vitamin and a powerful antioxidant that prevents free radicals. Thus vitamin E reduces the oxidative stress of liver by its antioxidant properties and improves the hepatocellular damage.

**Reference:**

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4984672/> 2. <https://clinicaltrials.gov/ct2/show/record/NCT01792115>

## NEW Centralized Adverse Drug Reaction Reporting Tool

### Follow Below Process to Report an ADR Online

1. Refer link [https://vaems.aku.edu/aems\\_prod/Default.asp](https://vaems.aku.edu/aems_prod/Default.asp)
2. Click the Event Type **Medication Adverse Drug Reactions (ADR)**
3. Submit Patient Details
4. Assign the incident to your Area/SL
5. Lastly don't forget to send the drug/s container/vial to Drug & Poison Information Center located in Main Pharmacy

**Note: Use Yellow Cards in case of downtime**

Incase of any query related to Medication ADR Call Hotline 1479 for more information call Drug and Poison Information Center, Ext 1504 and 1506 or e-mail at [drug.information@aku.edu](mailto:drug.information@aku.edu)

### Report ADR at

<http://portal.aku.edu./pharmacy/adrrf.htm> OR [http://vaems.aku.edu./aems\\_prod/Default.asp](http://vaems.aku.edu./aems_prod/Default.asp)

### Provide us your Valuable Feedback!

To keep the Pharmacy Newsletter of Aga Khan University Hospital (AKUH) updated we would like to take your valuable feedback. We are grateful to you for sparing few minutes of your precious time to complete form by below online link or form can be emailed to you as well. Just drop us an email with subject **Newsletter Feedback**. Email us at: [drug.information@aku.edu](mailto:drug.information@aku.edu)

Thank you in advance for your feedback!

Link: <https://goo.gl/forms/Ghh1Nc2KY2jEkiUL2>



آغا خان یونیورسٹی ہسپتال، کراچی

The Aga Khan University Hospital, Karachi

