

To: Pediatric Healthcare Providers in Maryland

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Subject: Chloroquine/Hydroxychloroquine: A one-pill killer

Due to the COVID-19 pandemic, there is interest in utilizing chloroquine (CQ) and hydroxychloroquine (HCQ) for the treatment of patients where therapeutic options are limited. However, it is important to remember that CQ and HCQ can cause severe, life-threatening toxicity in overdose. **An ingestion of 1-2 tablets of CQ or HCQ can be fatal for a small child and a dose of 5 g in adults is almost universally lethal.**

Toxicity includes profound cardiac ion channel ($I_{K1} > I_{Kr} > I_{Na} > I_{Ca}$), which results in QTc prolongation, impaired ventricular conduction (QRS prolongation), and increased automaticity/excitability. Severe hypokalemia occurs secondary to intracellular potassium shifting. This combination of a proarrhythmic state and hypokalemia, increases the risk of ventricular dysrhythmias (ie. Torsades de pointes). Additional symptoms of toxicity include: seizures and hypotension.

As CQ and HCQ are being revitalized for the treatment of COVID-19, physicians need to be alert for the possibility of poisoning. Providers should be cautious when prescribing these agents for home use, especially in the pediatric population. At a time when children are forced home from school secondary to closures and isolated due to social distancing, their parents/guardians are also balancing telecommunicating responsibilities with caregiving; children are likely at increased risk for unintentional medication exposures. Adding such a dangerous medication to this home scenario is the perfect storm for a potential lethal exposure. Pediatricians need to educate patients on these dangers and advocate for proper medication use and storage.

Additional information can be found at

<https://mdpoison.com/media/SOP/mdpoisoncom/ToxTidbits/2020/March%202020%20ToxTidbits.pdf>

As always, the poison center is always available 24 hours a day, 7 days a week at (800) 222-1222.

Thank you for your attention to this important pediatric safety message.