



هَيْئَةُ الدَّوَاءِ المَصْرِتِيَّة

الإدارة المركزية للرعاية الصيدلانية
الإدارة العامة للممارسات الدوائية و الصيدلانية

Pharmacy Practice Newsletter

“Know what’s new... Optimize care”

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Inside this Issue

Introduction	1
THC false positive urine test	1
Practice Update: Colchicine and Long-Term Treatment of Acute Coronary Syndrome	2
Oral Inhalers Use Series (1): Metered Dose Inhaler (MDIs)	3
DU&PP News	4
References	5

Introduction

The Central Administration of Pharmaceutical Care in the Egyptian Drug Authority is keenly interested in upgrading the pharmaceutical services provided to the patient and boosting the pharmacotherapy-related knowledge of all healthcare providers, which will positively impact the patient’s health and safety.

From this point, the General Administration of Drug Utilization and Pharmacy Practice (DU&PP) is pleased to publish the *Pharmacy Practice Newsletters*, which aims to aid practitioners in their mission to optimize care. Topics related to pharmacotherapy and pharmacy practice will be addressed within our newsletter issues. The newsletter will provide an up-to-date, concise summary that fits perfectly into the healthcare provider’s tight schedule.

We utilize evidence-based medicine (EBM), which integrates the best available research into clinical care, to support the decision-making process for healthcare professionals. To optimize patients’ treatment plans and ensure their safety and efficacy, clinicians must closely follow the literature for any updates related to their practice, given the dynamic nature of the clinical research.

Cannabinoids / Tetrahydrocannabinol (THC) False Positive Urine Test

- Nowadays, urine drug screens are commonly ordered, and their results have serious consequences.
- Therefore, it is worth knowing several agents can cause a false positive test for THC.
- You should know and counsel your patients about agents known to produce false positive THC urine immunoassays such as:
 - Non-steroidal anti-inflammatory drugs (NSAIDs) such as Ibuprofen, Naproxen, Tolmetin
 - Efavirenz (antiretroviral)
 - Baby wash and soap
 - Proton pump inhibitors (PPIs) especially Pantoprazole
- Furthermore, when a drug of abuse (DOA) test is obtained for forensic or legal purposes, any positive result on the initial screening assay is confirmed using a second confirmatory assay (gas chromatography/mass spectrometry (GC/MS) or liquid chromatography/tandem mass spectrometry (LC/MS/MS). A confirmatory test is utilized specifically because false-positive DOA results with first tests are known to occur, and the confirmatory test significantly improves accuracy.

Practice Update: Colchicine and Long-Term Treatment of Acute Coronary Syndrome

Recently, Colchicine has been included in the long-term treatment of Acute Coronary Syndrome (ACS) in the 2023 European Society of Cardiology (ESC) Guidelines for the Management of (ACS). The new ESC guidelines define the (ACS) as a “spectrum of conditions that include patients presenting with recent changes in clinical symptoms or signs, with or without changes on 12-lead electrocardiogram (ECG) and with or without acute elevations in cardiac troponin (cTn) concentrations”.

The long-term treatment of (ACS) focuses mainly on secondary prevention of (ACS). It should start as early as possible after the index event, and it aims to:

- Improve quality of life
- Decrease morbidity and mortality.

But what is the recommendation regarding Colchicine?

The 2023 ESC guidelines on ACS state that “Low-dose colchicine (0.5 mg once daily) may be considered, particularly if other risk factors are insufficiently controlled or if recurrent cardiovascular disease events occur under optimal therapy” Class of recommendation “IIB” Level of Evidence “A”. This class of recommendation means that usefulness/efficacy is less well established by evidence. While the level of evidence means that the data are derived from multiple randomized clinical trials or meta-analyses.

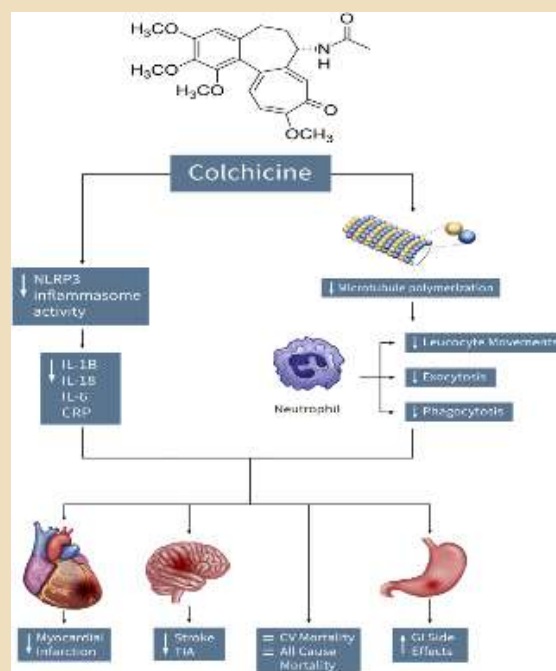
The recommendation came based on two randomized, controlled, double-blind trials:

- The Colchicine Cardiovascular Outcomes Trial (COLCOT).** The trial enrolled 4745 patients with recent (ACS) events. It showed that low-dose colchicine (0.5 mg daily) was associated with a significant reduction of the primary composite endpoint (Cardiovascular (CV) death, resuscitated cardiac arrest, Myocardial Infarction (MI), stroke, or urgent revascularization) in comparison to placebo.
- The Low-dose Colchicine trial-2 (LoDoCo2),** which enrolled 5522 patients with Chronic Coronary Syndrome (CCS) (84% of whom had prior ACS) randomized to colchicine (0.5 mg daily) or placebo. The primary endpoint in this trial was the (composite of (CV) death, MI, stroke, or ischemia-driven coronary revascularization) rate. It was significantly lower in the colchicine group compared to the placebo group. However, the incidence of non-CV death was higher in the colchicine group compared to the placebo group.

Inflammation plays a central role in the pathogenesis of atherosclerosis and acute coronary events. This explains the role of colchicine here as colchicine has anti-inflammatory activity. It primarily impedes tubulin polymerization and microtubule formation and thus inhibits leukocytes' migratory, exocytotic, and phagocytotic functions by suppressing the expression of selectins, which are upregulated in atherosclerosis, particularly following MI. Moreover, colchicine executes anti-inflammatory effects via the Nucleotide-binding domain, Leucine-Rich-containing family, Pyrin domain-containing-3 (NLRP3) inflammasome inactivation and a decrease in the release of interleukin (IL)-1 β , IL-18, IL-6, and C-reactive protein.

Colchicine appeared previously in:

- 2021 ESC Guidelines on cardiovascular disease prevention for secondary prevention of CVD, particularly if other risk factors are insufficiently controlled or if recurrent CVD events occur under optimal therapy” (IIB)(A).
- 2015 ESC Guidelines for the diagnosis and management of pericardial diseases as first-line therapy for acute pericarditis as an adjunct to aspirin/NSAID therapy (I)(A).



Oral Inhalers Use Series (1): Metered Dose Inhaler (MDIs)

Educate your patients the proper technique for using MDIs, as follows:

The MDIs technique steps; Manually-actuated pressurized MDIs with & without a spacer

I: Using for the first time (Priming the inhaler):

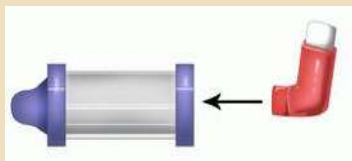
1. Uncap the mouthpiece and check for loose objects inside.
2. Shake the MDI for five seconds.
3. Press down on the inhaler to release the medication (Away from your face).
4. Wait a few seconds, shake the inhaler, and press the canister again.
5. Repeat the last step two more times (for a total of four times).



II: Usual use:

1. Take off the inhaler cap, hold the inhaler upright, and check the dose counter, if present.
2. Prime your inhaler as if you were using it for the first time in case you have not used it for two weeks or more.
3. Shake the inhaler vigorously for 5 seconds.

4. If a spacer is needed; insert the inhaler mouthpiece into the spacer hole and ensure that it fits in, keeping it horizontal.



5. Sit upright, tilt your head back slightly, and breathe gently away from the inhaler.



- 6.1 If a spacer is needed, take off the spacer cap and then insert the spacer mouthpiece into the mouth. Ensure that the lips firmly seal the mouthpiece of the spacer.



- 6.2 If no spacer is needed, insert the inhaler mouthpiece into the mouth, ensuring that the lips firmly seal the mouthpiece of the inhaler.



7. Take a slow, deep breath at the same time you press down on the medication canister.

- 8.1 If a spacer is used, hold the medicine in your lungs for about 5 to 10 seconds. If you don't get a full breath or can't hold your breath long enough, you can inhale a second time to fully empty the chamber and hold your breath again for about 5 seconds.



- 8.2 If no spacer is used, the patient presses down the inhaler to release one dose at the same time. Hold the medicine in your lungs for as long as is comfortable (about 5 to 10 seconds).



9. Remove the spacer or the inhaler from the mouth and exhale normally.

10. Rinse the mouth with water if ICS (Inhaled Corticosteroid) is being used.

- If you need more than one puff, wait about 20 to 60 seconds, shake the canister again before the next puff, then repeat the steps.

Types of MDIs: Breath-Actuated Pressurized and Manually-Actuated Pressurized MDIs.

Commonly used drugs in MDI form: Short-Acting B2-Agonist (SABA), Long-Acting B2-Agonist (LABA), Short-Acting Muscarinic Antagonist (SAMA) and Inhaled Corticosteroids (ICS).

Tips for patients while using MDIs:

DOs

- Prime the inhaler before use.
- Shake the inhaler between doses.
- Complete exhalation before priming.
- Hold the inhaler upright.
- Seal the lips close enough to the inhaler.
- Hold the breath after inhalation.
- Rinse the mouth after using.

DON'Ts

- Inhale by nose.
- Breath out when actuating.
- Stop inhalation at actuation.
- Inhale too rapidly.
- Press more than one actuator at the same time.
- Put the metal canister of the inhaler in water.
- Use the inhaler at counter zero.

DU&PP News: The Fourth National Initiative for Pharmaceutical Care and Pharmacy Practice (Safe Medication....Safe Life)

The Egyptian Drug Authority launched the activities of the Fourth National Initiative in Pharmaceutical Care and Pharmacy Practice under the title (*Safe Medication....Safe Life*).

The Drug Utilization and Pharmacy Practice team conducted community awareness sessions at Rod al-Farag Culture Palace, and Saqqara Public Library, in line with the Society Engagement Approach and Egypt Vision 2030, to build healthy and aware communities.

The initiative aims to spread awareness among various members of society regarding the safe and effective use of medications, to obtain the maximum therapeutic benefits, through conducting on-site awareness campaigns in different public places in the Egyptian governorates, and to discuss the use of medications in multiple topics related to non-communicable diseases, such as diabetes, cardiac and hypertension diseases, chest disease, and use of analgesics, in addition to the awareness of cancer medications side effects.

The initiative is scheduled to target visiting public places, such as cultural centers (culture palaces), public libraries, outpatient clinics in hospitals, community service centers in universities, or any other public places.



The initiative's sessions witnessed fruitful discussions among society members, as its activities began with raising awareness about the use of analgesics and the side effects of cancer medications, especially breast cancer, as part of the Egyptian Drug Authority's activities to celebrate World Breast Cancer Day.

This comes within the efforts made by the Egyptian Drug Authority to improve and sustain drug awareness and pharmaceutical services provided throughout the Arab Republic of Egypt and its constant keenness to promote the optimal and rational use of medications.



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