PRESENTATION
Black Box Drugs We Use: What’s the Risk?

DESCRIPTION
The black box drug list seems to be growing yet we are constantly faced with drug shortages limiting choices when caring for patients in the emergency department. Many have used these drugs extensively in the past and feel quite comfortable with continuing this use on patients. What is our risk when we do this? Is it a reasonable risk?

The speaker will summarize black box warnings on drugs frequently used in the emergency department, assess the risk of this continued use, justify appropriate use in specific patients, and identify critical documentation needed when choosing to use these drugs.

OBJECTIVES
• Summarize black box warnings on drugs frequently used when caring for patients in the emergency department.

• Assess the risk of continued use of these drugs despite these warnings.

• Justify appropriate continued use of black box drugs in the context of specific patients presented through a case-based approach.

• For each drug/drug class, 1) the problem, 2) the data, 3) where is used within the emergency department, and 4) the verdict of it is safe to use.

• Topics discussed will be fluoroquinolones, tramadol, droperidol, midazolam + olanzapine, NSAIDs, and ondansetron.

DISCLOSURE
No significant financial relationships to disclose.
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“Serious or life-threatening risk”
HIGHLIGHTS OF PRESCRIBING INFORMATION
These highlights do not include all the information needed to use AVELOX® safely and effectively. See full prescribing information for AVELOX.

AVELOX® (moxifloxacin hydrochloride) Tablet, film-coated
AVELOX® (moxifloxacin hydrochloride) Injection, solution for IV use
Initial U.S. Approval: 1999

To reduce the development of drug-resistant bacteria and maintain the effectiveness of AVELOX and other antibacterial drugs, AVELOX should be used only to treat or prevent infections that are proven or strongly suspected to be caused by susceptible bacteria.

WARNING:

Fluoroquinolones, including AVELOX®, are associated with an increased risk of tendinitis and tendon rupture in all ages. This risk is further increased in older patients usually over 60 years of age, in patients taking corticosteroid drugs, and in patients with kidney, heart or lung transplants [see Warnings and Precautions (5.1)].
37% consider boxed warnings
FLUOROQUINOLONES
Tendon Rupture

4.1 fold ↑
(elderly + steroids)
43.2 fold ↑
Achilles

Seizures
Neuropsychiatric Effects
Myasthenia Gravis
Peripheral Neuropathy

RR 2.07

QT Prolongation

Moxifloxacin

> Azithromycin
C. difficile


aHR 3.44
Aortic Dissection/Aneurysm

RR 2.43

Hyperglycemia
(up to 7/1,000)

Hypoglycemia
(up to 10/1,000)
Retinal Detachment (RR 4.5)

ED, ED Obs, Inpatient Boarders, Discharge Rx
Uncomplicated UTI

Acute bacterial exacerbation of chronic bronchitis

Acute bacterial sinusitis
TRAMADOL

8 boxed warnings!
Just told 200 medical students tramadol is the Donald Trump of pain medicines: dangerous, irrational, and you're going to regret it

11:17 AM - 21 Nov 2016
Respiratory Depression
Accidental Ingestion
NAS
Concomitant benzos
Abuse Dependence Withdrawal

‘Messy’ pharmacology

Erratic metabolism

Leppert W. Pharmacology 2011;87(5-6):274-85.
22% of first-seizure pts had recent tramadol use

1. Mean total tramadol dose in last 24 hours: 140 mg

2. Duration of tramadol use less than 10 days: 84.5%

3. Seizure within 6 hours of tramadol consumption: 74%
Hypoglycemia

OR 2.61

DOES IT WORK?

Osteoarthritis: modest

Neuropathic: comparable to alternatives

IN THE ED

MS: < hydroc/APAP
Ankle: = hydroc/APAP

ED Obs, Inpatient Boarders, Discharge Rx
I'M BACK
BABY
277 reports > 65 cases > 2 possible

273 OR cases reported (1997-2002)

Droperidol ≤ 1.25 mg

10 serious cardiovascular events (2 deaths)

No cause and effect

N/V 1.25 mg  Migraine 2.5
CHS 1.25-2.5 mg  Agitation 5-10
Electrolyte
Other QT meds
Cardiac
↑ age
Risk Factor
ED
“Droperidol is an effective and safe medication in the treatment of nausea, headache, and agitation. The literature search did not support mandating an electrocardiogram or telemetry monitoring for doses < 2.5 mg given either IM or IV. IM doses of up to 10 mg of droperidol seem to be as safe and as effective as other medications used for sedation of agitated patient.”

0.625 mg → 1.25 mg → 2.5 mg*

*Except agitation
Midazolam
Lorazepam
Diazepam
Opioids

GABA

Midazolam
Lorazepam
Diazepam

H₂N
Monitored Setting
IV/IM Olanzapine + IV/IM Benzodiazepine

Case reports of postmarketing adverse event experiences with olanzapine intramuscular treatment in patients with agitation


Jan 2004 – Sep 2005

160 cases

29 fatalities

66% concomitant benzos
ED, ED Obs, Inpatient Boarders
NSAIDS
(ketorolac, ibuprofen, naproxen)
Cardiovascular thrombotic events

↑ 7-8 events/1000 persons/yr

Naproxen safest

CV disease
↑ age
Male gender
Duration/dose

Risk Factor
GI Bleeding Ulceration Perforation

OR: 5.1

Anticoagulant/antiplatelet
Duration > 7d
Steroids
↑ age
Risk Factor
ED, ED Obs, Inpatient Boarders, Discharge Rx
Summary

1. Avoid FQs and Tramadol
2. Use Droperidol & Midazolam
3. Caution: olanzapine + benzos
4. NSAIDs: Use lowest effective dose
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