

Look-Alike Drugs: Avoiding Potential Medical Errors

Visually, similar packaging for drugs with drastically different uses can lead accidental interchange with catastrophic consequences. Recently, our hospital supply consisted of remarkably similar packaging for midazolam, heparin, and rocuronium vials [Figure 1]. We work in a government aided tertiary care hospital, which provides healthcare to economically challenged patients in subsidized rates. We follow a no prescription policy, and use consumables that are available on schedule.

Rocuronium is a skeletal muscle relaxant; Midazolam, an anxiolytic; and Heparin is an anticoagulant. As can be imagined, potential medication errors could be lethal. A vigilant resident noticed rocuronium being loaded in a syringe and not midazolam, for a patient who required sedation for a procedure under local anesthesia, and alerted the whole team. We brought this to the notice of the supply department immediately, and a stock of dissimilar looking drugs was made available.

We made several changes after this incident. These included separate storage spaces for muscle relaxants, color coded labels, storing used ampoules or vials till the end of the case for verification, and drawing drugs into syringes just before injecting, with a two person check on the process. Unfortunately, barcoded drug labels are not yet available in our hospital.

Drug related errors are the most common cause of patient safety incidences. According to a systematic review by Assari *et al.*, the estimated incidence of preventable adverse drug events is 15/1000 person-years, causing a worldwide burden of US \$42 billion/year.^[1] A study on perioperative drug administration found that 1 in 20 drug administrations resulted in errors, of which

79% were preventable, suggesting a pressing need for intervention.^[2]

The availability of look-alike, sound-alike (LASA) medication puts the onus of patient safety on vigilance and perfection on part of the health-care providers, thus leaving margin for human errors.^[3]

The National Patient Safety Agency advisory, which consisted of the use of different colors, fonts, displaying critical information, and dosages for safe labels.^[4] The World Health Organization advisory also included suggestions for safe storage, administration of these drugs, and an annual review of LASA drugs.^[5] The mere existence of these advisories should attest to the magnitude of the problem caused by availability of drugs in either similar packaging or similar trade names. There, however, seems to be a knowledge practice gap, which results in repeated occurrences of similar incidents.

There is a need to continue to report the existence of such drugs despite available literature, to forewarn those, administering these drugs. It may encourage policy makers to include verification of LASA drugs before including them in the hospital supply. Finally, pharmaceutical companies must be made aware of the catastrophic consequences of marketing drugs, labeled in aforementioned manner.

The immediate solution to the problem, however, lies in careful vigilance and prompt reporting of potential drug errors.

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Conflicts of interest

There are no conflicts of interest.

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Figure 1: Similar looking vials of Rocuronium, Midazolam and Heparin, which were later replaced by dissimilar vials

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