

## Mishap due to look alike ampule: Matter of serious concern

Sir,

The drug errors in anesthesia can be life-threatening. Drug errors not only include administration of wrong drug, incorrect dose or through wrong route, it also includes repetition and omission of drug.<sup>[1]</sup> Appropriate step must be taken to reduce its incidence.

We are reporting a case of a 45-year-old female scheduled for an appendectomy. She had no other co-morbidities, and all other routine investigations were in normal limit. In the operation theater, monitoring with electrocardiogram, noninvasive blood pressure (BP) and oxygen saturation (SpO<sub>2</sub>) was started, and a 20-gauge intravenous cannula was secured. Patient was given subarachnoid block at L3-L4 level in sitting a position using 15 mg of bupivacaine heavy (0.5%) and immediately after that patient was laid supine. Surgery started when adequate sensory and motor levels were achieved.

After around 45 min when surgery was about to end, injection diclofenac was injected in intravenous infusion to avoid positional pain and to provide postoperative analgesia to the patient. Within few minutes of starting the infusion, suddenly patient became restless and dyspneic. She stopped responding to verbal commands and had apnea. BP increased from 110/70 to 150/90 mm Hg, SpO<sub>2</sub> fell from 100% on room air to 65% within 5-10 min

of infusion. Immediately patient was ventilated with 100% oxygen using Bains circuit. Injection propofol (1%) 100 mg was given, and the patient was intubated with size 7.5 endotracheal tube and connected to Bains' circuit. She was manually ventilated with 100% oxygen. Propofol infusion was started at 50 µg/kg/min. Intravenous infusion in which drug was injected intraoperatively was immediately stopped. Blood sugar and electrolytes were checked and were within normal limits. After about 10 min, patient's vitals were stabilized and she was shifted to the intensive care unit.

On enquiring, it was found that injection atracurium was inadvertently loaded in place of injection diclofenac as the new batch of atracurium ampules was very similar to ampules of diclofenac. These two ampules had similar label and color coding [Figure 1].

Patient had spontaneous respiratory efforts after around 30 min. Propofol infusion was stopped, and injection neostigmine with glycopyrolate was given. Around 40 min later, patient developed adequate muscle power and was responding to verbal commands. After proper suctioning, extubation was done, and the patient was shifted to postoperative recovery room for further monitoring. She was hemodynamically stable and had 100% SpO<sub>2</sub> on room air. This case highlights the human error, which resulted in inadvertent loading of the wrong drug, resulting in neuromuscular paralysis.



**Figure 1:** Two similar looking ampoules of atracurium and diclofenac

Jensen *et al.*<sup>[2]</sup> suggested various strategies to prevent medication errors in the operating room. All syringes should be properly labeled. The label of any drug ampule or syringe should be carefully checked before the drug is filled or is injected. There should be separation between placement of look-alike ampoules or dangerous drugs. Errors in drug administration during anesthesia should be reported and reviewed. Drugs to be drawn up and labeled only by the anesthesia provider who will administer them. Color coding should be used for a class of drug. It should be checked during drug administration, that right drug for the right patient in the right dose at right time from the right route is being given.<sup>[3]</sup>

In our case wrong labels were placed on syringes of atracurium and diclofenac sodium. This was due to look alike ampoules. If the labels were color coded, this error could have been avoided. Drug label should be

checked properly before loading in syringe. The person who loads a particular drug should label the syringe immediately before touching the next drug or syringe. This will help in reducing such errors and preventing such mishaps.

Priyanka Sethi, Ankita Verma<sup>1</sup>, Avneesh Khare

Department of Anesthesia and Critical Care,

All India Institute of Medical Sciences,

<sup>1</sup>Department of Anesthesia and Critical Care,

Dr. SN Medical College, Jodhpur, Rajasthan, India

**Address for correspondence:**

Dr. Priyanka Sethi,

Department of Anesthesia and Critical Care,

All India Institute of Medical Sciences,

Jodhpur - 342 005, Rajasthan, India.

E-mail: dr.priyanka\_sethi@yahoo.co.in

**REFERENCES**

1. Wheeler SJ, Wheeler DW. Medication errors in anesthesia and critical care. *Anesthesia* 2005;60:257-73.
2. Jensen LS, Merry AF, Webster CS, Weller J, Larsson L. Evidence-based strategies for preventing drug administration errors during anesthesia. *Anesthesia* 2004;59:493-504.
3. Tobias JD, Yadav G, Gupta SK, Jain G. Medication errors: A matter of serious concern. *Anaesth Pain Intensive Care* 2013;17:111-4.

**Access this article online**

Quick Response Code:



Website:

www.saudija.org

DOI:

10.4103/1658-354X.152903