Many medications have similarities in their appearance and/or their sound of drug names. Confusion between this “Look-Alike and Sound-Alike (LASA)” drugs can result in potentially harmful medication errors. These errors are often multifactorial and may occur at any step of medication use process.

The aim of this study was to analyze all LASA drugs incidents reported in a university hospital in order to prevent them and educate caregivers.

A retrospective study: 36 month period (September 2013 - September 2016)

Analyze of all reported LASA drugs incidents. For each incident, we collected:

- ATC (Anatomical Therapeutic Chemical Classification System) drug class
- Step of the medication process
- Potential gravity for the patient (according to a tool validated by the national health authority):
  - minor → moderate → major → critical → catastrophic
- Corrective measures introduced

Potential gravity for the patient

No lethal incidents, but:

- 18 incidents classified « critical » (67.9%)
- 9 incidents classified « catastrophic » (32.1%) → potentially lethal

For example:
A confusion between domperidone and digoxin:
→ administration of digoxin
→ prolongation of patient hospitalization

ATC drug class

- Confusion between same ATC classes drugs: 20 incidents (71.4%)
- The most involved drugs:
  - OPIOIDS: 8 incidents (28.6%)
  - ANTIBIOTICS: 4 incidents (14.3%)

28 LASA drugs incidents reported
(6.4% of the 439 medication errors reported)

Step of the medication process

![Bar chart showing the distribution of medication errors]

- Dispensing
- Administering
- Dispensing & Administering

16 incidents occurred during medication administration (57.1%)

Corrective measures introduced

Two incidents were reported to the National Agency for Medicines and Health Products Safety.

A local multidisciplinary medication safety committee defined preventive measures of LASA drugs incidents:

- specific training for the pharmacy staff
- placing warning stickers “confusion” on storage bin
- good drug storage practices in the care units

Conclusion

Medication errors caused by LASA drugs are frequent but are certainly underestimated. Their reporting must be encouraged in order to identify and prevent them in the future.