

Look-alike injectable drugs : Detection and first assessment

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INTRODUCTION

In Belgium, all hospitals are required to take safety measures with high risk medication. We focused on look-alike (LA) injectable drugs in our 1124-bed general hospital.

The main purpose of this study was identifying LA-drugs in our formulary. The secondary purpose was to determine whether same firm or volume is a contributing factor.

METHOD

All injectable drugs of our formulary were selected and categorized based on their shape (Table 1). Their characteristics were assessed (volume, firm, high risk and use).

Table 1 : Categories of injectable drugs

Type of drug	Number	Number of possible pairs
Aerosol	3	3
Plastic amoule	6	15
Packaged ampoule	11	55
Glass ampoule	107	5.671
Ecoflac	3	3
Insulin	10	45
Miniplasco	12	66
Perfusion	6	15
Vial	107	5.671

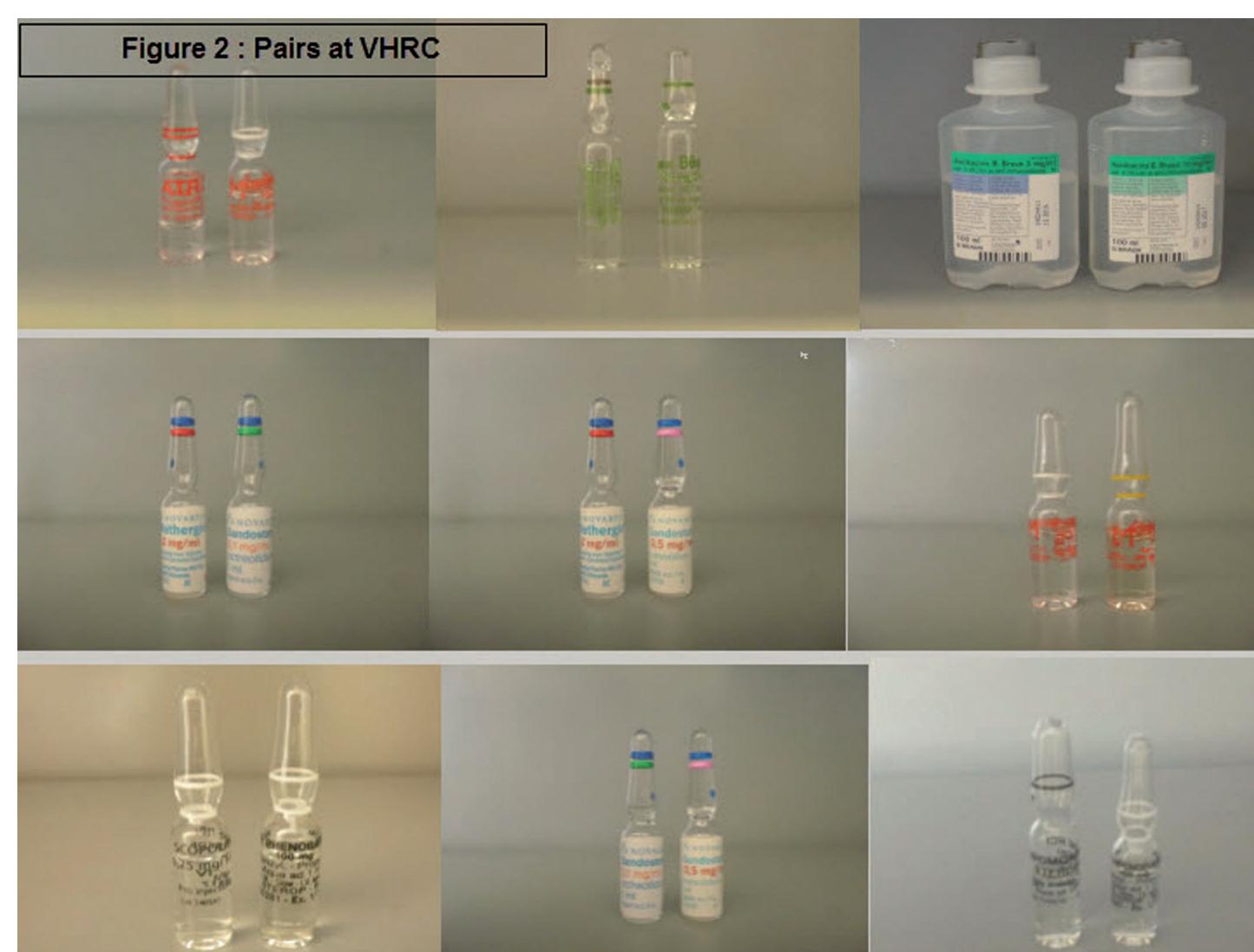
19 health care practitioners (doctor, pharmacist, nurse and technician) assessed pairs that looked alike (fig.1). When ≥ 18 agreed, the pair was said to be at "very high risk of confusion" (VHRC), and when 13 to 17 agreed, the pair was said to be at "high risk of confusion" (HRC).



Fig. 1

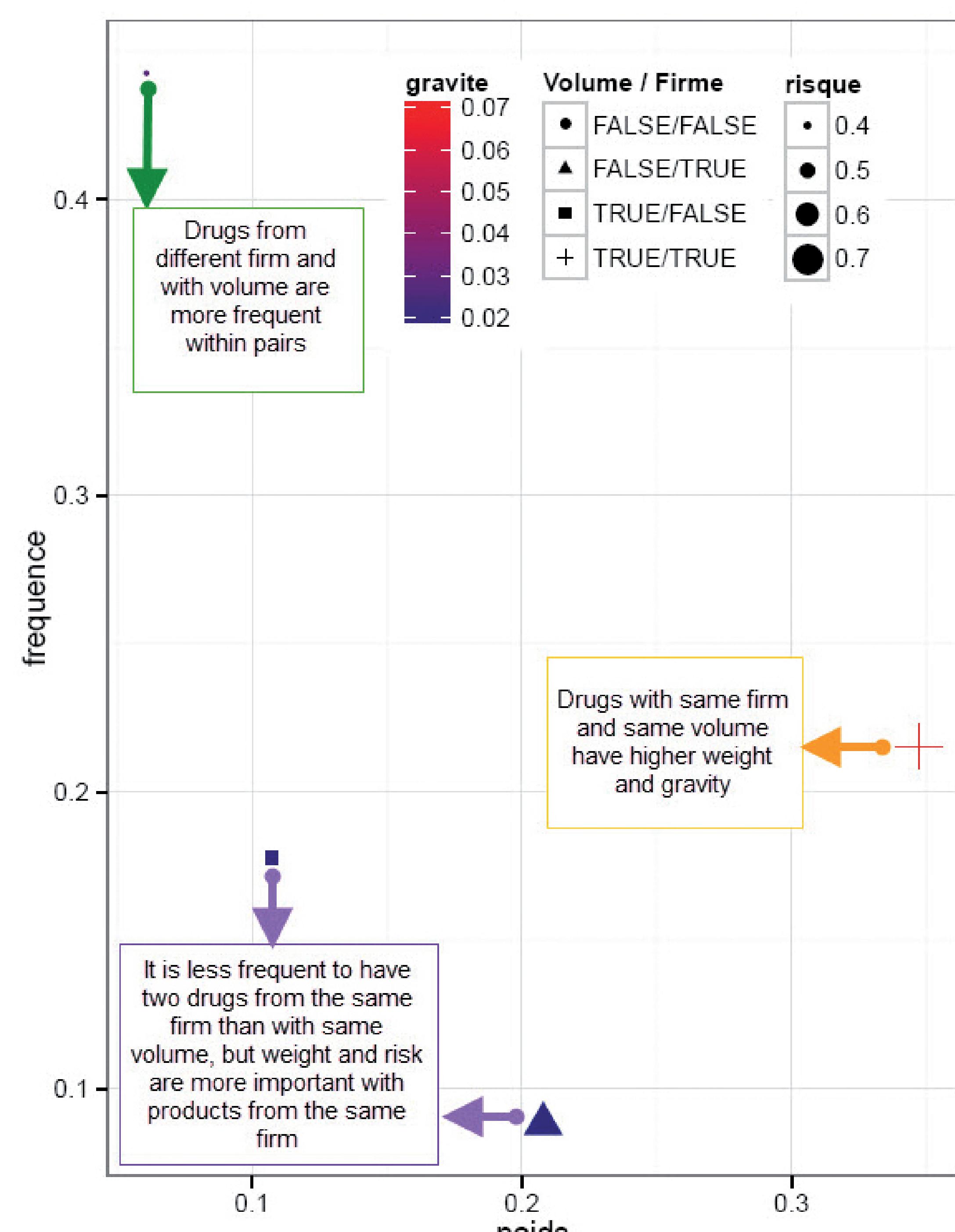
RESULTS

Out of 11544 possible pairs, only 329 (2.85%) were recognized as being « look-alike » by one of the practitioners. 9 pairs were at VHRC (fig. 2) and 19 were at HRC.



Drugs from the same firm and that have the same volume have a higher risk, weight and gravity. Same firm seems to be the most important contributing factor to high risk and weight (fig. 3).

Fig. 3 : Risk factor analysis



Definitions

Confusion = Mean response (0=no risk of confusion | 1=risk of confusion)

Risque = Risk (0=no high risk medication | 1=high risk medication)

Fréquence = Pair frequency of consumption = (fréquence.x + fréquence.y)/sum (fréquence.x + fréquence.y)

Poids = Weight = Risk* Confusion (theoretic)

Gravité = Gravity = Frequency* weight (clinical impact)

CONCLUSION

LA-drugs are an important issue in our practice. The identification of LA-drugs in our hospital allowed us to inform practitioners. Safety measures can be implemented in hospitals but this analysis shows that pharmaceutical firms should also address the issue when developing packaging of drugs.