



## Practice sting 2024-02

### Practice sting Incompatibility parenteralia

This Practice sting is particularly interesting for the hospital committee that deals with medication safety and for nurses

By giving two incompatible medicines in the same line, a lumen in a catheter can be destroyed, as shown by a notification received by VMI.

#### Notification

A patient has a central venous catheter with two lumens (red and purple). The patient receives chemotherapy over the red lumen, amoxicillin/clavulanic acid and a continuous infusion of magnesium chloride four times a day over the purple lumen. Because amoxicillin/clavulanic acid does not have the desired effect, the physician decides to prescribe flucloxacillin. The nurse administers flucloxacillin through the same line as the magnesium chloride infusion without first checking in the hospital's Parenteralia Manual whether this is possible. An hour after the second flucloxacillin administration, a nurse notices that the line is clogged. The nurse attempts to heparinize the line in the hope of regaining access to the line. Unfortunately - just like the flushing that was tried later on - it was not successful. The purple lumen is no longer usable.

#### Analysis

Medicines to be administered parenterally are preferably not given in one line. In many situations this cannot be avoided and multiple drugs are administered via a y-site on one line, via a double-lumen line, or combined in one compartment (infusion bag or syringe). It is essential that the person administering the medication checks in advance whether the medicines to be administered are physically and chemically compatible. Incompatibilities may lead to precipitation and/or ineffectiveness of the drug.

A line of the central venous catheter can also break, requiring replacement. Replacing a central venous catheter is stressful for the patient and burdensome for the organization.

To prevent a line from breaking, a nurse administering the parenteral medicines must check whether the medicines can be given over one line. For this purpose, the nurse must consult the hospital's Parenteralia Manual. The nurse in the notification had not done this. In this case, the nurse would not have found any information about this in the manual. The nurse should then have contacted a (hospital) pharmacist. The pharmacist has more resources available to determine whether a parenteral medicine is compatible with another parenteral medicine.

If administration of two medicines in one line is not possible or there is uncertainty about this, the nurse and pharmacist can determine together how the medicine can be administered.

#### Recommendations

For the hospital committee that deals with medication safety

- Bring this Practice sting to the attention of the nurses.
- Point out to the nurses that if:
  - they have to give several parenteral medicines in one line, they must always check the Parenteralia Manual first before administering them to see if this is possible.
  - there is no information in the Parenteralia Manual about giving multiple medicines in one line, they must contact a (hospital) pharmacist.
  - they want to administer several medicines in one line where (possible) problems are expected, they must contact the (hospital) pharmacist for advice on how to administer these medicines.