Handling of Lines for Drug Solution Administration

Key points for safe use

(Case 1) When administering glucose solution through a double-lumen central venous (CV) catheter, glucose solution was accidentally injected into the line for adrenaline, causing bolus administration of adrenaline, which resulted in ventricular fibrillation in the patient.

1 Precautions when administering drug solution through Y-site injection port

- Before the administration of drug solution via the Y-site injection port, make sure to check what kind of drug solution is present in the tubing.

Adrenaline remaining in the line will be pushed out! (Rapid administration!)

Note: A double lumen catheter possesses two lumens.
2 Precautions in connecting lines: 1

Incorrect connection of infusion line and oxygen tube

Make sure to trace all lines with your finger from the end sources to the infusion sites in the patient’s body when multiple lines are used on the patient!!
Incorrect connection of the epidural anesthesia line to the IV fluid infusion line

(Case 3) After the line for epidural anesthesia was disconnected, it was accidentally reconnected to the IV fluid infusion line.

3 Precautions in connecting lines: 2

When you find a disconnected line, trace the line calmly! In particular, use extra caution at night when the room is dark.
(Case 4) Flow rates for the two fluids were entered in reverse by mistake, and administration of drug solutions had started.

4 Mix-up of administration lines

- When entering the flow rate of the infusion pump, make sure to confirm the indicated flow rate by following the line precisely.

Directed flow rate: 250 mL/h

Directed flow rate: 120 mL/h

Lines were crossed to each other

A wrong flow rate, 250 mL/h, was set up by looking at the infusion bag hanging above!!

A wrong flow rate, 120 mL/h, was set up by looking at the infusion bag hanging above!!

When multiple infusion and syringe pumps are used for a patient, always trace the lines to check if any of the lines are crossed to each other. Do not enter flow rates by assumption.

About this information

* PMDA Medical Safety Information is issued by the Pharmaceuticals and Medical Devices Agency for the purpose of providing healthcare providers with clearer information from the perspective of promoting the safe use of pharmaceuticals and medical devices. The information presented here has been compiled, with the assistance of expert advice, from cases collected as Medical Accident Information Reports by the Japan Council for Quality Health Care, and collected as Adverse Drug Reaction and Malfunction Reports in accordance with the Pharmaceutical Affairs Law.

* We have tried to ensure the accuracy of this information at the time of its compilation but do not guarantee its accuracy in the future.

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