Parenteral Nutrition, How To Prevent The Next Mistake?

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BACKGRAUND: Parenteral Nutrition (PN) is considered to be a complicated and expensive treatment and can cause various complications(1,2) which demands collaboration between the skilled staff members made up of clinicians with specialty training in nutrition and can include physicians, dietitians, pharmacists, and nurses (3) in order to give the appropriate PN dosing rate, and dosing time which is required for each patient with through out, following up possible complications and side effects(4,5).

In Carmel medical center, infusion pack is delivered by a pharmacist according to prescription given from nutrition support team (NST), and afterwards the Infusion instructions are recorded by one of the department physicians in the patient EHR. Recently there have been several mistakes that have been reported, which made it urgent to check matching between NST decision and the record of instructions in EHR.

OBJECTIVES: To recognize the mismatch between HER instructions for delivery of PN, against the actual delivery by the pharmacy according to prescription from NST and characterization of these cases in terms of mismatching.

METHODS: Issuing a report of the PN doses delivered by the electronic system called "UNIT-DOSE" in the pharmacy according to the name of patient and days of treatment of 2018 vs. electronic instructions that has been recorded by one of the department physician in "Kamelyon" system or "Meta Vision " The parameters examined were: type of solution, composition, volume, supplements-additives (electrolytes, vitamins, trace elements), infusion rate and method of infusion (central / peripheral). Infusion rate was examined separately as a follow up by a nutritionist.

RESULTS: In 2018, there were a total of 898 treatment days (105 patients). 54% of the instructions were computerized with inappropriate and in some of them there was more than one mismatch. In most cases, the mismatch was in vitamins and trace elements (45%)- there was 11% mismatch in infusion rate, there was 12% dangerous mismatch as instructions were given for the wrong solution.

DISCUSSIN: From our research, we found a significant difference between computerized recording of PN instructions and what the patient actually received. This is due to the separation between the hand-written prescription by the PN staff and the computerized instruction recording by the treatment team. This may constitute a danger to patients.

CONCLUSIONS: Examination and follow-up by the pharmacist is important for identifying and treating errors of this nature appropriately. Guidance sessions for the treating staff should be conducted in the different departments. The prescription must be matched by the PN staff to the computerized instruction by placing a prescription pattern. Set up protocols in the computerized system that guide the treatment staff in the department to record the correct instructions.

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