



Ciprofloxacin and Total Parenteral Nutrition (TPN) Solutions Incompatibility

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One of the critical roles of clinical pharmacists in daily practices in hospitals is to assure safety and quality of injectable infusions administered to critically ill patients who suffer from calorie deficit and require parenteral nutrition admixtures. These infusions contains different nutrients and other components in variable ratios. Sometimes, (PN) need to be administered with drugs for dual therapy in specific cases like in case of infections and malnutrition. Stability studies and compatibility tests should be done prior to administration to assure safety and avoidance of medication errors events. Ciprofloxacin (CF) as an antibacterial agent usually used for management of moderate-to-severe gram positive and gram negative infections.

A recent study revealed that Co-administration of CF and PN may lead to incompatibility problems that may lead to embolization in blood vessels and other serious adverse effects. The study was conducted using different ratios of CF: PN admixtures containing calcium and magnesium in different molar ratios. The results said that co-administration of CF and PN should be used only after performing of compatibility tests as precipitation may occur with higher concentrations of CF (>1 mg/ml) and in higher molar ratios of magnesium to calcium ions > 1:1 [1-4].

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