

## A Single-Center Study on Intravenous Cannulation

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**Introduction:** Of the nosocomial infections, bloodstream infections are vital since it has potential to ends up with sepsis, which has high mortality. Of the hospital-acquired bloodstream infections, a significant proportion is associated with intravenous (IV) cannulation.

**Objective:** To find out the compliance with the protocol for IV cannulation in practice.

**Methodology:** A descriptive cross-sectional study was conducted observing a hundred IV cannulation done at a secondary care hospital, Sri Lanka following approval from hospital administration from 01-10-2018 to 30-10-2019. The study was conducted through an infection control nurse with no prior notice to the relevant ward/unit. Observations were recorded and the procedure was checked against the IV cannulation guidelines stated in the infection control manual of Sri Lanka.

**Results:** Of the 100 cannulations procedures, 90 were from wards and 10 from the preliminary care unit and four from the intensive care unit. In none of the procedures, the healthcare worker (HCW) himself or herself was introduced to the patient. In all procedures, physicians' recommendation for cannulation was checked and patient details were verified with bed head ticket. Allergy for plaster or povidone-iodine was inquired in 70%. The cannulation procedure was explained to the patient in 83%. The patients' preference as to which arm the cannula should insert was inquired in 28% of patients. Patients' non-dominant arm was used for cannulation in 52% and patients' dominant hand was used for cannulation in 48%. The selected insertion site was disinfected with 70% alcohol and allowed to dry in 24%. After cleaning, the tentative puncture site was touched by HCW in 58% cannulation and not so in 42%. Following the procedure, the cannula was secured with plaster in all calculations. The cannula was flushed with normal saline in 89% of cannulation procedures. Entry ports of cannula kept closed when not in use in 94%. The clinical waste following cannulation was disposed into an appropriate bin in 96%. The date of cannula insertion was labeled on the plaster over cannula in 69% and it was not labeled in 31%. After the procedure, hand washing was performed by 44% and not at 56%. The patient was thanked for the compliance in 24% of cannulation and not so in 76%. In all cannulation procedures, the procedure was not recorded in patient records.

**Conclusion:** Before cannulation, verification of patient details and the physician's recommendation was highly satisfactory. However, the cleaning of the cannulation site before the procedure was highly unsatisfactory. Flushing the cannula, which is against the guidelines, was observed in 89%. Securing the cannula was satisfactory but label the date of cannulation was poor and recording of the cannulation was not observed following any cannulation. Waste disposal following cannulation was satisfactory. Ethics relating to patient handing such as explain the procedure to the patient was satisfactory but introduce the HCW by himself/herself to the patient, obtain consent, inquire about patients' preference and be thankful to patients for compliance following procedure was poor.

Keywords: "Intravenous cannulation; Infection control"

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