

Advik Technique' of Peripheral Intravenous Cannulation- Different Perspective in Difficult Situations

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EDITORIAL

Peripheral intravenous cannulation is an essential part of management of patients in hospitals, especially in emergency-department. Steps of intravenous cannulation includes: sanitization of operator's hands, followed by tourniquet placement, identification of vein by placing the extremity in dependent position, and asking the patient to make a tight fist. Skin of the patient is prepped with antiseptic solution. After the vein becomes prominent, needle of cannula is inserted with bevel facing upwards until a flashback of blood is seen in the hub of cannula. Once this is seen, the cannula is progressed, needle is fixed while the rest of the cannula is advanced gently into the vein.

Peripheral venous cannulation is basic but critical component of patient care. It is a simple, reliable, and inexpensive method to save a patient's life in need. It is an art which is learnt with practice and experience. Even in experienced hands, it may fail in difficult patient subsets. The common difficulties encountered in establishing the intravenous-access include movement of patient during cannulation, presence of venous valves obscuring passage of catheter, short or tortuous course of vein, etc. In case of failed cannulation, it is a traditional practice to remove entire cannula and start again. It leads to bleeding at the punctured site. Moreover, tourniquet in situ leads to further bleeding, and consequently it is released. More time is misspent to apply pressure on the punctured site using a sterile gauze-piece to stop the bleed. After losing precious time in securing hemostasis in the previously punctured site, a second attempt is made to cannulate the patient. Tourniquet is again applied at a separate site

and, the entire process is repeated again. This practice is time consuming and usually, requires help of assistant to reduce the overall time taken to achieve successful cannulation.

We deduced a novel 'Advik technique' of peripheral intravenous cannulation in difficult or failed situations. In our technique, when we encounter a failed cannula situation, we leave the catheter of the cannula in situ, remove its needle and cap the catheter. There is no need to release the tourniquet or apply pressure on the punctured site, as the capped cannula itself helps to achieve hemostasis of its punctured site. In the meanwhile, with the tourniquet still in place, we find another vein- adjacent or nearby and insert a second cannula in it. [Figure 1] We fill a syringe with saline and flush it through the injection port of this second cannula to check its patency and ensure successful cannulation. After successfully inserting the second cannula, tourniquet is removed. After this, the previously failed cannula is now removed. Sterile gauze is pressed over the punctured site and hemostasis is achieved.



Figure1. ADVIK technique: please note that we have not removed the previous failed cannula, and it prevents bleeding from the site till the time, a second successful cannula is placed.

‘Advik technique’ of peripheral cannulation helps to achieve hemostasis quickly and effectively at the punctured sites which is useful, especially in emergency scenarios where

time is of the essence and to establish a quick intravenous access is a priority. This technique is also useful when we don’t have the luxury of an assistant while inserting intravenous cannula.

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