



A innovative use of discarded intravenous fluid bottle: as arterial cover

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In the present era of anesthesia and critical care the use of indwelling arterial catheters have a significant role for continuous haemodynamic monitoring both in the operating room and in critically ill patients in ICU. Arterial cannulation provides easy and convenient access, allowing multiple blood samplings, blood gas analysis and cardiac output measurements in patients with cardiovascular diseases undergoing surgeries which involve major fluid shifts, significant blood loss and autonomic disturbances. Yet, arterial cannulations are not without problems and complications. Accidental intraarterial (IA) injections of IV substances used during anesthesia can result in significant morbidity secondary to local ischemia and subsequent tissue necrosis. Case reports and incidences of iatrogenic intra-arterial (IA) injection of medications have been published since the 1940's [1-3].

With unintentional IA injection, both acute and chronic manifestations can be expected. Many patients complain of immediate discomfort, ranging from local irritation to intense pain distal to the site of injection [4-8]. Because pain is often the initial symptom, patients who cannot report discomfort are often subjected to an increased Intraarterial dose of medication. This may result in an increased likelihood of severe adverse sequelae. Such patients include those who are undergoing general anesthesia, receiving mechanical ventilation, comatose or have altered mental status, mentally handicapped, of the pediatric population, and trauma victims with distracting injuries. In a setting in which a medication needs to be administered urgently or emergently, it is easy to envision how a medication could be injected through a port of an arterial line.

Here we report a simple and indigenous way of securing the arterial line(arterial cover) with the help of used bottle of intravenous fluids so that they stand apart from the rest of peripheral lines and alert the care giver about the presence of the indwelling arterial catheter in the extremity and avoid accidental intrarterial injections and thereby preventing serious complications (Figure 1). The use of arterial cover also provides an added advantage of preventing the dampening of arterial waveform due to position change and pressure from



Figure 1. A simple and indigenous way of securing the arterial cover with the help of used bottle of intravenous fluids.

operating surgeons. As used plastic bottles of intravenous fluids is readily available both in operating rooms and in ICU, the above mentioned idea is less time consuming and does not incur any extra cost on patients budget.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

Authors' contributions	TT	HV	YKM
Research concept and design	✓	--	--
Collection and/or assembly of data	✓	--	--
Data analysis and interpretation	✓	--	--
Writing the article	✓	--	--
Critical revision of the article	✓	--	--
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