LETTER TO EDITOR

Innovative, yet simple method to tackle Vascular Complications after Radial Artery Cannulation.

Short Title: SKIMS TVasPres

Many medical procedures require access into the vascular system of the patient either into vein or artery. Typically the access is achieved by inserting a cannula or introducer sheath through the skin into the selected blood vessel.^[1]

Arterial cannulations are used routinely for hemodynamic assessment and blood sampling during major surgery and in critically ill patients, hence serve multiple roles perioperatively and in critical care areas but are not without complication. Arterial lines are used routinely for continuous hemodynamic monitoring during major surgical procedures and in critically ill patients. They are also utilized for arterial blood gas analysis and multiple blood sampling.^[2,3,4]

There are multiple sites for arterial cannulation including but not limited to radial, brachial, and femoral arteries. The radial artery is the most utilized for access in adults and pediatrics. Arterial cannulation is a relatively safe procedure that poses little risk of complication when performed by an appropriately skilled practitioner.^[3]

Vascular access-site complications are an important cause of morbidity following catheterization procedures.^[1,2] The most common complications with arterial cannulation are occlusion of the vessel, bleeding from the insertion site, or hematoma.^[3] The other reported complications of radial artery cannulation include infection, digital gangrene, pseudoaneurysm, skin necrosis, median nerve palsy^[4,5] and rarely the radial artery catheter fracture.^[4]

When taking the arterial cannula/ catheter out from the arteriotomy site, the immediate concern is continuous ooze/ bleeding from the high arterial pressure at skin puncture/ arteriotomy site.

Manual compression is the “gold standard” in achieving hemostasis of an arteriotomy site but with the limitation of patient discomfort and time demand for healthcare providers.^[1,2] However vascular closure devices passive

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Figure 4: SKIMS TVasPress applied for 5 minutes without any ooze/ bleed from high pressure radial artery at the skin puncture site.

(hemostasis pads) or active (Cardiva Catalyst, Collagen plug device or clip devices) may be used but then again come with high cost and less availability.^[1]

Hence we devised an innovative yet simple, cost-effective, easily available and applicable method of applying pressure at arterial puncture site, using back flat surface of leur lock plug of intra-venous (IV) cannula under adhesive to maintain constant pressure at the arterial puncture/arteriotomy site to prevent the continuous blood ooze from the high pressure arterial puncture skin site and saves the manpower being wasted for manual compression, besides allows early mobilisation out from the operating room or ICU. The technique should be named as **SKIMS TVasPress**. The technique can be also used for preventing ooze from the low pressure venous puncture sites as well.

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