



Propofol vial coring

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When inserting a needle into a medication vial, a small piece of the rubber stopper can become sheared off in a process referred to as coring. The [Figure](#) demonstrates an incident where coring occurred in the stopper using an 18G x 1.5“ SOL-M™ Blunt Fill Needle (BN1815; Smiths Medical ASD, Inc., Minneapolis, MN, USA), with the rubber piece seen floating in a syringe of propofol.

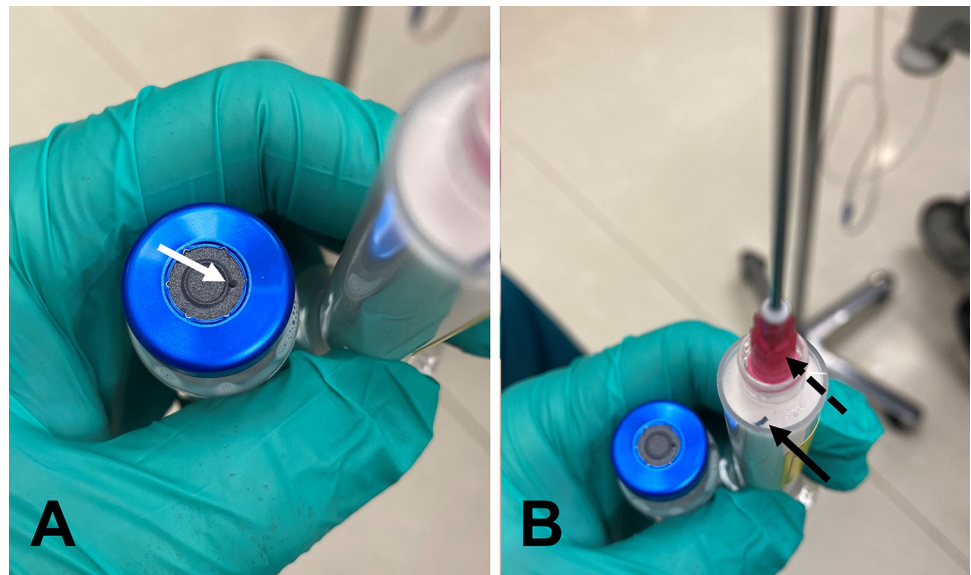
Concerningly, these rubber fragments may be drawn up into the syringe and administered intravenously to the patient. The clinical risk to patients after intravenous injection of these rubber cores has not been studied. Reported complications after injection of other visible particulate matter include phlebitis, reduced tissue capillary perfusion, and possible formation of pulmonary

granulomas and embolism.¹ Beyond inadvertent intravenous injection, concerns may be raised about perineural or neuraxial injection of rubber cores during anesthetic care. Anesthesiologists should be aware that the incidence of rubber coring with visible particles has been reported to be up to 40%.¹ Although the risks are incompletely characterized, we believe inspecting syringes for visible cores prior to injection can limit potential morbidity with minimal disruption to routine care.

Some measures have been described to decrease the incidence of coring. Wani *et al.* reported that the incidence of coring is significantly reduced when sharp needles are used instead of blunt needles.² In addition to needle choice, one study found that using a 45-degree insertion angle *vs* perpendicular insertion reduced the incidence from 29.2% to 15.2%.³

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Figure Illustration of an incident where coring occurred in the stopper (Panel A, white arrow) using an 18G x 1.5" SOL-M™ Blunt Fill Needle (BN1815; Smiths Medical ASD, Inc., Minneapolis, MN, USA) (Panel B, dashed arrow), with the rubber piece (Panel B, black arrow) seen floating in a syringe of propofol



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