Vapocoolant sprays are used in some facilities to manage pain associated with accessing totally implanted venous access devices (TIVADs). They are neither indicated nor contraindicated, and literature supporting safe and effective use within this process is lacking. The purpose of this article is to evaluate the use of vapocoolant sprays within the TIVAD access process and to facilitate best practice accounting for product use and safety, institutional policy, and individual patient needs.

AT A GLANCE

- Although not considered drugs, vapocoolant sprays carry contraindications and adverse effects.
- Policies indicating application prior to chlorhexidine gluconate limit the usefulness of vapocoolant sprays that have an effect of less than one minute.
- Educating nurses on appropriate use, individual patient assessment, and critically evaluating institutional policies facilitates best practice use of vapocoolant sprays.

KEYWORDS
vapocoolant sprays; totally implanted venous access device; evidence-based practice

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Vapocoolant Sprays

Use with totally implanted venous access devices

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Totally implanted venous access devices (TIVADs) are frequently used in patients with cancer receiving hematopoietic stem cell transplantations or requiring administration of irritant or vesicant chemotherapies (Moran & Camp-Sorrell, 2002; Schiffer et al., 2013; Schulmeister, 2017). They are typically placed, under anesthesia, by a surgeon or interventional radiologist into a pocket between the skin and rib, carrying the disadvantage of being the most expensive venous access device to insert (Schiffer et al., 2013; Schulmeister, 2017) and, subsequently, to remove if complications occur.

TIVAD access can be performed the same day the TIVAD is placed. Bruising, inflammation, and discomfort are common (Schulmeister, 2017; Young, Young, Vogel, Sutkowski, & Venkataperumal, 2016), possibly warranting pain management. Central line–associated blood stream infections (CLABSIs) and surgical site infections (SSIs) are major complications with TIVADs that can be prevented by standardizing procedures and implementing evidence-based practice (Camp-Sorrell, 2009; Conley, 2016; Marschall et al., 2014; O'Grady et al., 2011). Preventing infection is particularly important in oncology because TIVADs are accessed frequently and in the presence of neutropenia, increasing risk (Camp-Sorrell, 2009; Conley, 2016; Moran & Camp-Sorrell, 2002; O'Grady et al., 2011; Schiffer et al., 2013). Although there is debate on the necessity (Cope & Matey, 2017; Eisenberg, 2011), some policies mandate sterile techniques because of the importance of CLABSI and SSI prevention.

Cleansing the access site with chlorhexidine gluconate (CG) is imperative (Camp-Sorrell, 2009; Conley, 2016; Cope & Matey, 2017; O'Grady et al., 2011). CG is applied using friction for 30 seconds, followed by 30 seconds of waiting for the solution to dry (Camp-Sorrell, 2009; Cope & Matey, 2017). However, policies indicating anesthetic application prior to CG limit the usefulness of vapocoolant sprays that have an effect time of less than one minute (Gebauer Company, 2018a, 2018b, 2018c).

Vapocoolant Sprays

Vapocoolant sprays are topical anesthetics sprayed onto skin from a nonsterile single- or multi-use container placed three to seven inches from the application site (Gebauer Company, 2018a, 2018b, 2018c). Immediate evaporation of the vapocoolant spray causes a temperature drop that decreases nerve conduction, creating an anesthetic effect lasting up to one minute. Indications include controlling pain associated with injections, venipuncture, minor surgical procedures, and sports injuries (Gebauer Company, 2018a, 2018b, 2018c).

The Oncology Nursing Society (ONS) access device standards (Cope & Matey, 2017) recommend evaluating the need for topical anesthetic for TIVAD access and include vapocoolant sprays among a list of options for anesthetic. However, literature cited in this list does not address the use of vapocoolant sprays on TIVADs.