

# Two Techniques to Avoid Cyst Spray During Excision

Bitra Tristani-Firouzi, BA; Elliott D. Herron, BS; Christopher M. Hull, MD; Mark D. Herron, MD

Surgical removal of epidermoid cysts can result in “cyst spray,” posing a nuisance and risk to the surgeon, staff, and patients. Employing simple techniques at the time of anesthesia administration may decrease exposure to cyst spray. We describe 2 methods that can help: (1) placing an antiseptic-soaked gauze pad over a premarked lesion, or (2) covering the cyst with a clear biohazard bag.

## Practice Gap

Epidermoid cysts are asymptomatic, well-circumscribed, mobile, subcutaneous masses that elevate the skin. Also known as epidermal, keratin, or infundibular cysts, epidermoid cysts are caused by proliferation of surface epidermoid cells within the dermis and can arise anywhere on the body, most commonly on the face, neck, and trunk.<sup>1</sup> Cutaneous cysts often contain fluid or semifluid contents and can be aesthetically displeasing or cause mild pain, prompting patients to seek removal. Definitive treatment of epidermoid cysts is complete surgical removal,<sup>2</sup> which can be performed in office in a sterile or clean manner by either dermatologists or primary care providers.

Prior to incision, a local anesthetic—commonly lidocaine with epinephrine—is injected in the region surrounding the cyst sac so as not to rupture the cyst wall. Maintaining the cyst wall throughout the procedure ensures total cyst removal and minimizes the risk for recurrence. However, it often is difficult to approximate the cyst border because it cannot be visualized prior to incision.

Throughout the duration of the procedure, cyst contents may suddenly spray out of the area and pose a risk to providers and their staff (Figure, A). Even with

careful application around the periphery, either puncture or pericyclic anesthesia between the cyst wall and the dermis can lead to splatter. Larger and wider peripheral anesthesia may not be possible given a shortage of lidocaine and a desire to minimize injection. Even with meticulous use of personal protective equipment in cutaneous surgery, infectious organisms found in ruptured cysts and abscesses may spray the surgical field.<sup>3</sup> Therefore, it is in our best interest to minimize the trajectory of cyst spray contents.

## The Tools

We have employed 2 simple techniques using equipment normally found on a standard surgical tray for easy safe injection of cysts. Supplies needed include 4×4-inch gauze pads, alcohol and chlorhexidine, a marker, all instruments necessary for cyst excision, and a small clear biohazard bag.

## The Technique

Prior to covering the cyst, care is taken to locate the cyst opening. At times, a comedo or punctum can be seen overlying the cyst bulge. We mark the lumen and cyst opening with a surgical marker. If the pore is not easily identified, we draw an 8-mm circle around the mound of the cyst.

One option is to apply a gauze pad over the cyst to allow for stabilization of the surgical field and blanket the area from splatter (Figure, B). Then we cover the cyst using antiseptic-soaked gauze as a protective barrier to avoid potentially contaminated spray. This tool can be

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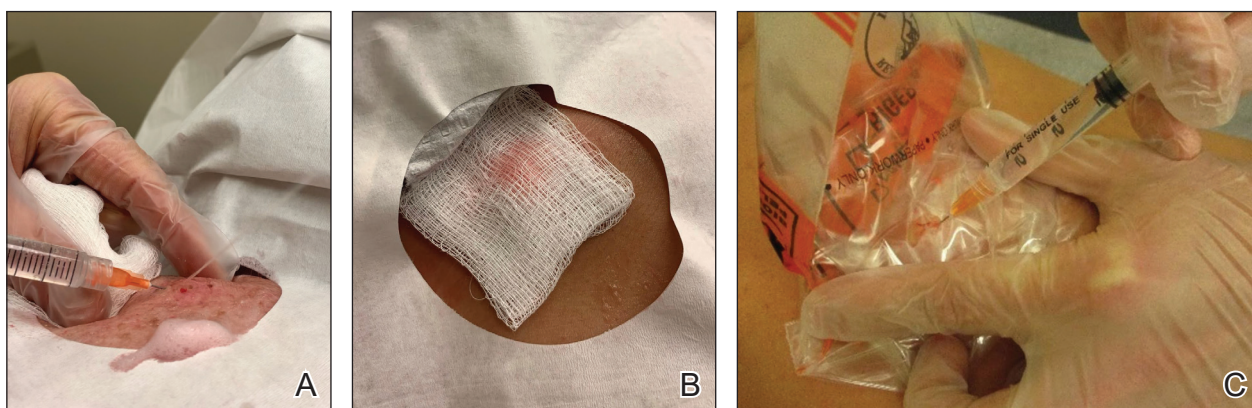
Bitra Tristani-Firouzi is from Pomona College, Claremont, California. Elliott D. Herron is from the University of Alabama Birmingham. Dr. Hull is from the Department of Dermatology, University of Utah, Salt Lake City. Dr. Herron is from Herron Dermatology and Laser, Montgomery, Alabama. The authors report no conflict of interest.

Correspondence: Mark D. Herron, MD, Herron Dermatology and Laser, 7260 Halcyon Summit Dr, Montgomery, AL 36117 (markdherronmd@herrondermatology.com).

*Cutis*. 2024 July;114(1):11, 26. doi:10.12788/cutis.1047

## AVOIDING CYST SPRAY

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A, During surgical excision of an epidermoid cyst, contents may spray out and pose a risk to clinicians and staff. B, Application of an antiseptic-soaked gauze pad over the cyst allows for stabilization of the surgical field and blankets the area from splatter. C, Alternatively, the cyst can be covered with a small clear biohazard bag to catch any spraying contents while allowing visualization of the surgical field.

constructed from a 4×4-inch gauze pad with the addition of alcohol and chlorhexidine. When the cyst is covered, the surgeon can inject the lesion and surrounding tissue without biohazard splatter.

Another method is to cover the cyst with a small clear biohazard bag (Figure, C). When injecting anesthetic through the bag, the spray is captured by the bag and does not reach the surgeon or staff. This method is potentially more effective given that the cyst can still be visualized fully for more accurate injection.

### Practice Implications

Outpatient surgical excision is a common effective procedure for epidermoid cysts. However, it is not uncommon for cyst contents to spray during the injection of anesthetic, posing a nuisance to the surgeon, health care staff, and patient. The technique of covering the lesion with antiseptic-soaked gauze or a small clear biohazard bag prevents cyst contents

from spraying and reduces risk for contamination. In addition to these protective benefits, the use of readily available items replaces the need to order a splatter control shield.

**Limitations**—Although we seldom see spray using our technique, covering the cyst with gauze may disguise the region of interest and interfere with accurate incision. Marking the lesion prior to anesthesia administration or using a clear biohazard bag minimizes difficulty visualizing the cyst opening.

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