



A Simple, Safe Technique for Thorough Seroma Evacuation in the Outpatient Setting

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Summary: Seroma formation, a common postoperative complication in reconstructive cases, can lead to capsular contracture and increased office visits and expenses. The authors present a safe, novel technique for ensuring the thorough removal of serous fluid in the outpatient setting. By relying on access with an angiocatheter, potential injury to permanent implants is minimized. The use of low continuous wall suction obviates the need of manual suction via multiple syringes and offers a rapid and thorough evacuation of all types of seromas. (*Plast Reconstr Surg Glob Open* 2014;2:e212; doi: 10.1097/GOX.0000000000000179; Published online 12 September 2014.)

Seroma formation in surgical wounds negatively affects wound healing and increases morbidity to patients. Seroma formation has an incidence of 1.7–6.3% in breast reconstruction cases and 10–45% in abdominoplasties.^{1–3} In addition to discomfort, persistence of seromas can lead to capsular contracture, infection, and shoulder dysfunction; less serious complications, though undesirable, include additional office visits, transportation problems, expense, and anxiety.⁴

In addition to a wide array of preventive strategies, current seroma treatment strategies include percutaneous needle aspiration, percutaneous suction drainage, and injection of sclerosants, with doxycycline and bleomycin being among the most common agents.^{5–7} The literature in breast surgery, vascular surgery, and surgical oncology is mixed on

whether drain placement be paired with sclerosing agents.^{8,9}

Needle aspiration of seromas around permanent implants carries a risk of injury to the device and often relies upon manual suction through the use of multiple syringes. Here, we present a novel, simple, and safe percutaneous technique for thorough and rapid seroma drainage in the outpatient setting.

The authors' technique expands the concept of using an angiocatheter to access the seroma.¹⁰ For a number of years, the authors have used insertion of a 14-gauge angiocatheter with vacuum suction for thorough evacuation of seromas. Supplies before starting include a 14-gauge angiocatheter with needle, 2 10-mL Luer lock syringes, suction cannister (wall-mounted in many clinics), and suction tube along with alcohol swabs, gauze, and ethyl chloride/numbing mist spray (optional).

The skin is prepped at the chosen site of aspiration. A numbing spray such as ethyl chloride mist spray may be used. With the first 10-mL syringe connected to the 14-gauge angiocatheter, the angiocatheter is inserted while aspirating on the syringe, analogous to using a finder needle in central line placement. Once seroma fluid is aspirated into the syringe, the catheter is advanced into the seroma and the needle and syringe withdrawn. A

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Received for publication June 29, 2014; accepted July 22, 2014.

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DOI: 10.1097/GOX.0000000000000179

Disclosure: The authors have no financial interest to declare in relation to the content of this article. The Article Processing Charge was paid for by the authors.

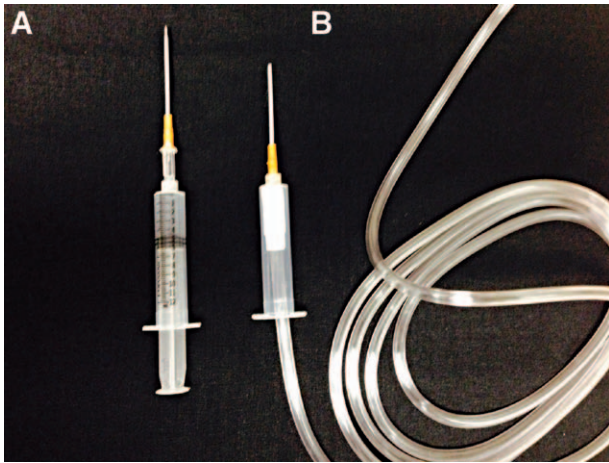


Fig. 1. A 14-gauge angiocatheter is connected to the first 10-mL syringe (A) to be used as a finder needle for the seroma. Once the seroma pocket is entered, the angiocatheter is advanced and the needle and syringe removed. The second 10-mL syringe (B) is attached to the angiocatheter. The plunger has been removed from the barrel and replaced with suction tubing hooked up to low continuous suction.

second 10-mL syringe with the plunger removed is connected to the angiocatheter (Fig. 1). The suction tubing is inserted into the barrel of the syringe, and low continuous suction is applied until the seroma is completely evacuated. In our experience, this typically takes less than a minute. The suction tube may be partially withdrawn from the tip of the barrel to intermittently break suction if it is felt that the catheter is stuck against the wall of the seroma cavity. Manipulation of the seroma pocket and implant can be performed without concern for puncture of the implant. The fluid in the first finder syringe may be sent for culture if clinically warranted. Once the seroma is completely drained, the catheter is removed and gentle pressure is held, and a simple dressing with antibiotic ointment and a bandage is placed.

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ACKNOWLEDGMENTS

The article does not contain clinical studies. This study was exempt from institutional review board exemption because no patient, physician, or hospital identifiers were examined.

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