

Broken and Retained Tip of Liposuction Cannula in the Scalp

S. S. Shirol¹  Lohith Y. N.¹ 

¹Department of Plastic Surgery, Karnataka Institute of Medical Sciences, Hubballi, Hubballi, Karnataka, India

Indian J Plast Surg

Address for correspondence S. S. Shirol, MS, MCh, Sampige Plastic Surgery Centre, 3rd floor, Signature Mall, Opposite Urban Oasis Mall, Airport Road, Hubballi, Karnataka 580030, India (e-mail: ssshiril@gmail.com).

Liposuction is a common cosmetic procedure and is generally considered safe. The complications can be avoided or reduced if the procedure is performed by an experienced and qualified plastic surgeon. Local complications like seromas, hematomas, and ecchymosis are relatively common¹ and extensively been reported in literature. However, the breakage

of liposuction cannula is an extremely rare complication and hence we report this case.

A 30-year-old male presented with lipoma over the occipital region (►**Fig. 1**). The patient was taken up for liposuction under tumescent anesthesia after confirmation by fine-needle aspiration cytology. The procedure was

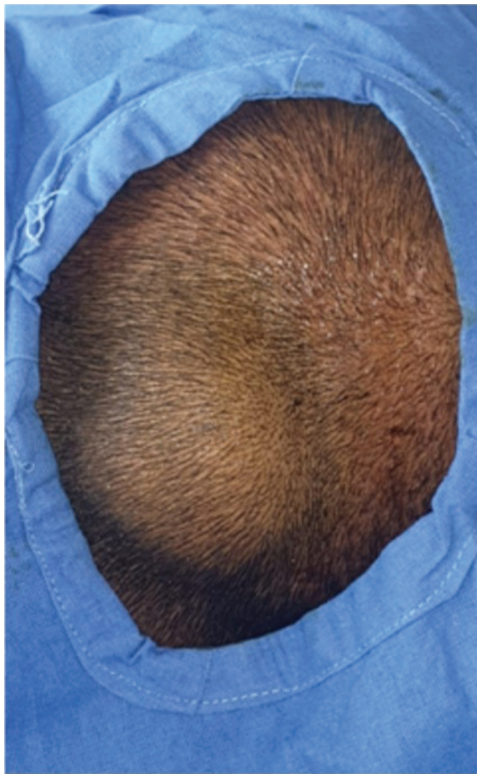


Fig. 1 Lipoma over the occipital region.



Fig. 2 Radiograph showing the retained broken cannula tip (white arrow).

DOI <https://doi.org/10.1055/s-0044-1787679>.
ISSN 0970-0358.

© 2024. Association of Plastic Surgeons of India. All rights reserved. This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial-License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Thieme Medical and Scientific Publishers Pvt. Ltd., A-12, 2nd Floor, Sector 2, Noida-201301 UP, India

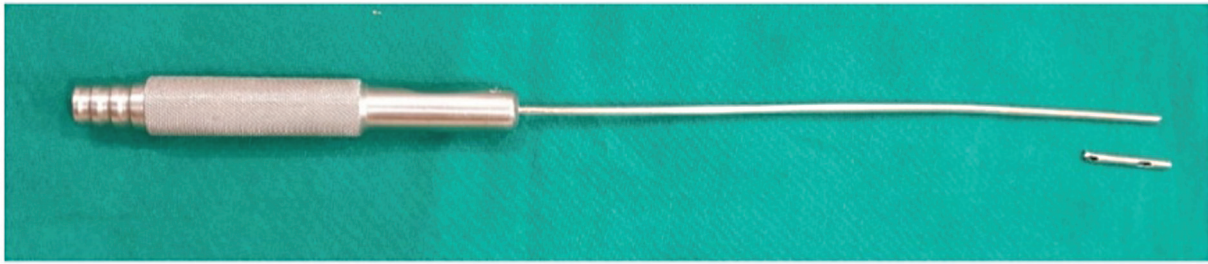


Fig. 3 Showing broken cannula tip on the right with the cannula on the left.

carried out with a 2.5-mm cannula. During the procedure we realized that the tip of the cannula was broken while reinsertion. After confirming that the tip is not in the drapes and has not fallen on the floor, the patient was immediately sent for a radiograph of the head and neck to confirm the site of the retained broken cannula tip, as there was no portable X-ray in day care center.

The radiograph showed the broken tip retained at the site of liposuction (►Fig. 2). The site was immediately explored under local anesthesia by extending the incision done for liposuction and the broken tip was retrieved (►Fig. 3).

Although liposuction is generally considered a safe procedure, it can have complications, either local or systemic. Severe complications including necrotizing fasciitis, toxic shock syndrome, hemorrhage, perforation of intestine, and pulmonary embolism—some even with lethal outcome—occasionally have been reported. These complications were mostly due to inadequate hygiene measures, inappropriate patient selection, and use of excessive local anesthesia during mega-liposuction (tumescent technique) and inadequate postoperative surveillance.² The complications can be avoided if proper care is taken. Local complication reported in our case is breakage of liposuction cannula tip. It is a rare complication and only two such cases have been reported in English literature.^{3,4}

Wolfenson et al reported a similar case with broken cannula tip in the left side of the chest³ and Herbst and Saltvig reported broken cannula in the right thigh during liposuction.⁴ In above both cases, the retained cannula tip was identified with C-arm and the broken tips were retrieved.

Wolfenson et al case report describes the cause for breakage is use of larger diameter cannulas more than 4 mm, which probably had defects, as narrow openings in the form of “slots,” in the region of the lumen that, because they were in the interior of the cannula, were not detected by either the manufacturer’s quality control evaluation or the medical team.³

Herbst and Saltvig case report describes the causes for breakage to be as follows: cannulas used for infiltration are long, with thin walls and have several holes. These three elements make the cannula potentially at risk of damage or breakage.⁴ Our case would be the third to be reported.

The breakage of the liposuction tip could be due to various reasons. Old cannula, which is used for years, might have lost its tensile strength, bend at the junction of the holes in the cannula, rusting inside the cannula which is not noticed by the surgeon or the operation theatre staff, faulty technique, redo liposuction in fibrous area, and repeated autoclaving of the cannula can also reduce the tensile strength. In our case, the cannula was old and we could have hit either the bone or superior nuchal line of the occipital bone repeatedly, minimal and tight space, galea aponeurotica, and the round contour of occipital area, cannula movement could have been hindered thereby contributing to the breakage of the tip in our opinion.

Regular change of cannulas and inspecting for any bends or cracks in the cannula could avoid this complication. Being in the scalp, it was relatively easy to remove the cannula with marginal extension of the primary incision.

Conflict of Interest

None declared.

References

- 1 Shiffman MA, Di Giuseppe A. Liposuction. Berlin, Heidelberg: Springer; 2006
- 2 Sattler G, Eichner S. Complications of liposuction [in German]. *Hautarzt* 2013;64(03):171–179
- 3 Wolfenson M, Roncatti C, Silva Júnior EA. Breakage of the tip of the cannula in the adipose tissue during liposuction. *Revista Brasileira de Cirurgia Plástica* 2012;27:490–492
- 4 Herbst I, Saltvig I. Cannula tip breakage inside adipose tissue during liposuction—a rare case report. *Plastic Reconstructive and Regenerative Surgery* 2022:76–78