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CANNULA TIP BREAKAGE INSIDE ADIPOSE TISSUE DURING LIPOSUCTION – A RARE CASE REPORT

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Summary

Introduction. Liposuction is a popular procedure worldwide and when done by a trained plastic surgeon it is very safe. We report a case of iatrogenic breakage of infiltration cannula during liposuction – a rare complication to liposuction. It poses no immediate harmful complications only discomfort for the patient until removal.

Case report. In this case report we conceded a 44-year-old female referred from a private clinic with a broken infiltration cannula from liposuction to the thigh. The localization of the broken cannula was confirmed with x-ray prior to surgery and reconfirmed using a c-arm peri-operatively. Gentle retrieval of the cannula was performed.

Discussion. Iatrogenic breakage of a cannula is a rare complication. The liposuction cannula was situated in the subcutaneous tissue and will pose no immediate harm to the patient compared to peripheral and central cannulas – that can have lethal complications.

Conclusions. When performed properly by a trained plastic surgeon liposuction is very safe procedure with little serious risks. Iatrogenic breakage of the infiltration is a rare occurrence and can be safely removed using x-ray imaging prior to and during surgery.

Key words: liposuction, equipment failure, cannula breakage, foreign body, plastic surgery

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INTRODUCTION

Liposuction is one of the most performed cosmetic procedures worldwide. Despite its popularity it is associated with a wide range of potential complications with varying severity even in the hands of an experienced surgeon, from a simple swelling to more severe complications such as internal organ puncture. Complications are relatively uncommon and of low risk compared to other procedures [1]. A rare complication is the breakage of the infiltration cannula inside the adipose tissue of the patient. In this article we report this rare complication with the solution – x-ray imagining and peri-operative guidance using a c-arm.

CASE REPORT

A 44-year-old healthy female underwent wet liposuction with Kleins fluid

Figure 1. X-ray frontal view.

Figure 2. X-ray lateral view.

administration prior to liposuction of her right thigh followed by breast augmentation. After infiltration of 300 ml Kleins fluid with a standard infiltration cannula, upon retraction, the surgeon notices the tip of the infiltration cannula is missing. The surgeon tries to locate the tip of the cannula by palpation, but it is non-palpable. The patient is then transferred to Rigshospitalet, Plastic Surgery Department for removal of the cannula tip using radiographic imaging (Figs. 1-2). X-ray of the right thigh in two planes – frontal and lateral view – reveals a 7.8 cm cannula tip located dorsally and laterally from the femur, approximately 12 cm caudally from the right trochanter major, close to the skin near the insertion point.

Under general anesthesia the original insertion point is extended to one centimeter and using a c-arm the cannula is identified and removed in toto using a pean. Pre-operative 1.5 g cefuroxime is administered intravenously prophylactically.

The patient is discharged in good health the next day.

DISCUSSION

The operation was performed in a private clinic with standardized norm and safety criteria. The cannula was a standard liposuction steel cannula, but further specification is unknown.

Complications associated with liposuction are relatively uncommon but when combined with other procedures the complication rate increases [2,3].

Only one other similar case is described in the literature in 2012 by Wolfenson et al. [2]. They failed to use x-ray imaging prior to surgery but had a successful result using a c-arm peri-operatively like in the present case.

Iatrogenic cannula fracture is previously reported in the literature e.g. by Kumar et al. [4]. They report a broken peripheral cannula fracture with proximal migration – a potentially fatal complication. They localized the plastic cannula using High Resolution Ultrasonography and CT scan. Broken central venous catheter cannula has

also been reported in the literature with complications like sepsis, perforation, thrombosis, air embolism, dysrhythmia, pneumothorax and myocardial infarction [4].
A broken liposuction cannula is a rare complication and the cannula in this study probably had a defect. The cannula is situated in the subcutaneous tissue and until it is removed it will do no harm to the patient compared to foreign bodies situated in the venous system – peripheral or central – which can have fatal complications for the patient. Liposuction is a safe procedure when performed by properly trained specialists following safe standard clinical practice. Should a rare complication such as the one in the present case occur, we recommend using x-ray imaging prior to surgery to establish location and depth and peri-operatively using a c-arm to confirm location upon incision.

CONCLUSIONS

A case of rupture of the infiltration cannula during a liposuction procedure is described. Liposuction is a safe common procedure. Breakage of a liposuction cannula is rare. The cannula is placed in the subcutaneous layer and will not do harm until removal. The metal cannula should be removed using a c-arm to control its placement and total removal.
Although constructed of good quality steel, 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. It would therefore be a safe procedure that the surgeon personally always does a pre-operative cheek of his instruments, checking their efficiency.

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Conflict of interest statement

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Ethical consideration

Written informed consent was obtained from each participant/patient for study participation and data publication.

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