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Medical Education Research Forum 2019

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5-2019

### Peri-stomal Fat Grafting to Enhance Parastomal Contour and Improve Ostomy Care

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#### Recommended Citation

Saab, Ihab; Ahmad, Hassan; Ivanics, Tommy; Worten, Andrew; Yoho, Daniel; Asai, Megumi; Zimnicki, Katherine; and Siddiqui, Aamir, "Peri-stomal Fat Grafting to Enhance Parastomal Contour and Improve Ostomy Care" (2019). *Case Reports*. 42.

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## Background

Stomas are common surgical procedures that have a wide range of complications. One of the challenges that is frequently encountered by surgeons and patients include having durable stoma appliance seal that may lead to loss of skin integrity and ulcerations. In addition, difficulties with stoma appliance fitting can lead to major life style modifications for the patients. We Irregularities in parastomal skin contour secondary to scarring, wound contraction, and change in weight and body habitus are major culprits for leaks. In cases were revising the stoma or relocating it are not options, other solutions are necessary. We report our experience with six patients who underwent fat grafting for difficult stoma to improve skin contour and ostomy care.

## Intervention

- The patients who underwent peristomal fat grafting to assist with improving ostomy appliance seal were identified with review of operative records.
- The procedure was performed under general endotracheal anesthesia.
- After tumescent infiltration, liposuction of the abdomen was performed through multiple small incisions. The location and volume of liposuction was determined based on patient body habitus and parastomal deformity.
- Harvested adipose tissue was washed and filtered. Fat was injected around the stoma in small aliquots using blunt needles until adequate contour was achieved.
- We frequently over-corrected the parastomal depressions to account for the 30% anticipated loss of the fat grafted over time.
- Medical records were reviewed to assess the improvement of postoperative stoma care.



Figure 1: Peristomal skin erosion with irregular depressed skin around the stoma, making the stoma appliance difficult to fit seamlessly.



Figure 2: Intra-operative image post fat grafting circumferentially around the ostomy making the skin uniformly elevated for better stoma appliance fitting.

## Outcome

- Six patients underwent parastomal fat grafting from February 2017 to June 2018.
- Three patients had an end-ileostomy, one had a loop ileostomy, one with a chronic enterocutaneous fistula with ostomy appliance, and one patient had a urostomy.
- An average of 192.5 mL lipoaspirate was harvested (range: 120 - 350 mL), and 108 mL of filtered and washed fat was grafted (range: 58-230 mL).
- One patient had near complete resolution of leaks after the surgery and no major issues were reported after one year from the procedure.
- Two patients had major improvement of appliance seal with short-term follow up with relapse of leakage after several months.
- Three patients had partial improvement in seal when compared to continuous leakage preoperatively.
- No complications were related to the procedure.

## Conclusion

- Fat grafting is a novel and safe technique that could provide a solution for difficult stoma.
- Any improvement in ostomy appliance fitting has major lifestyle improvement for the patients.
- This technique is especially useful when patients have prohibitive risks to have further transabdominal procedures.
- Larger sample size and long-term follow up will be needed for further assessment of the outcomes.

## Bibliography

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