

Complex Fistula Care: An Innovative Approach To The Treatment Of A Large Abdominal Surgical Wound With Multiple Enterocutaneous Fistulas Managed In The Outpatient Setting Using Transforming Powder Dressing

Symposium on Advanced Wound Care (SAWC)
Spring 2024 Meeting | Orlando, FL

Theresa Pineda, BSN, RN, CWOCN; Carolyn Cintron, RN, BSN, CWOCN;
Tammy Jensen Lichtman RN, BSN, CWON | AdventHealth System, Orlando, FL

INTRODUCTION

Post-operative complications for colorectal surgery patients are frequent, occurring in 1 out of every 3 patients.¹ Wound complications such as infections, dehiscence, formation of enteroatmospheric fistulas (EAF) and hematomas occur in up to 13% of patients, posing treatment challenges and resulting in prolonged hospital stays, increased postoperative mortality, readmissions, pain and decreased quality of life (QoL).¹ Readmission of patients who develop EAF is reported between 20% and 51% at 90 days in patients who survived the index admission.² The use of negative pressure wound therapy (NPWT) in open abdomens and EAF is controversial, requiring alternate solutions.³

METHODOLOGY & MATERIALS

A 40-y/o male presented with an acute obstruction of the sigmoid colon resulting in colon resection, Hartman's procedure and colostomy. Post-operative complications included compartment syndrome, colostomy necrosis, large abdominal wound (25 x 23 x 2.4 cm) and 13 EAF formations with projectile enteric content. NPWT was discontinued when fistulas developed. A larger fistula pouch was implemented to contain the enteric content and transforming powder dressing (TPD) was incorporated around the fistula for wound care. TPD is an extended wear dressing that forms a moist, oxygen-permeable, non-occlusive barrier to help cover and protect the wound.

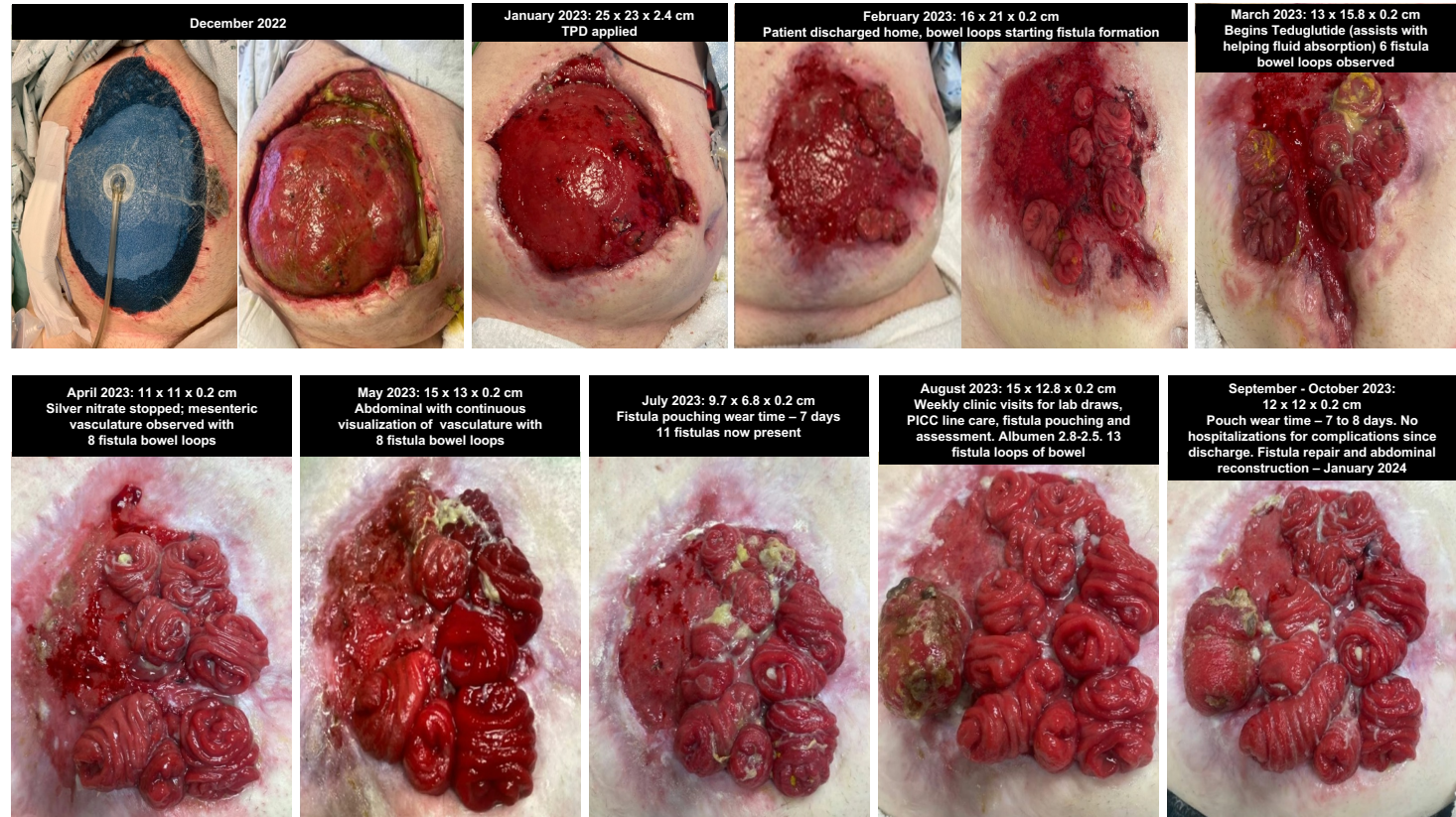
REFERENCES & ACKNOWLEDGEMENTS

(1) Tevis SE, Kennedy GD. Postoperative Complications: Looking Forward to a Safer Future. Clin Colon Rectal Surg. 2016 Sep;29(3):246-52. doi: 10.1055/s-0036-1584501. PMID: 27582650; PMCID: PMC4991963. (2) Hatchimonji JS, Passman J, Kaufman EJ, Sharoky CE, Ma LW, Scantling D, Xiong R, Holena DN. Enterocutaneous fistula after emergency general surgery: mortality, readmission and financial burden. J Trauma Acute Care Surg 2020 Jul; 89 (1): 167-172. (3) Bobkiewicz A, Walczak D, Smoliński S, Kasprzyk T, Studniarek A, Borejsza-Wysocki M, Ratajczak A, Marciński R, Drews M, Banasiewicz T. Management of enteroatmospheric fistula with negative pressure wound therapy in open abdomen treatment: a multicentre observational study. Int Wound J. 2017 Feb;14(1):255-264. doi: 10.1111/iwj.12597. Epub 2016 Mar 22. PMID: 27000995; PMCID: PMC7950031.

Acknowledgements: This poster was created in collaboration with Altrazeal Life Sciences Inc. All clinical cases and analyses were performed independently by the authors and no compensation was paid. For application instructions and risks of this device please refer to Altrazeal Instructions for Use. EDU-0145

RESULTS

Patient was discharged home on daily intravenous fluid rehydration, and followed up in clinic weekly for fistula pouching, lab draws, and PICC line care. Pouch wear time was 7-8 days and TPD was applied/topped off at each pouch change. TPD facilitated abdominal wound healing providing an intact surface to pouch, and improved pouch wear time. He has had no wound related complications and was managed in the outpatient setting using TPD on wounds surrounding the fistulas without readmission for 42 weeks (9.5 months) despite additional fistula generation. He reported less pain with TPD and improved QoL with the new pouching system.



DISCUSSION

Despite the complex nature of the case, the patient could be managed in the outpatient setting without wound related complications or readmissions through a well-executed discharge plan. TPD enabled pouching with increased wear time and improved wound healing was noted. The patient reported improved QoL and was able to resume his activities of daily living and return to work.