



ABSTRACT

Isotonic solution for management of high output fistula and stoma

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Background: *Enterocutaneous fistulae* (ECF) is a common complication in open abdominal surgeries which is commonly fixed by creating a stoma. High-output ECF defined as production of fistulae more than 500 mL per day. It is one of the complications that can occur in the presence of a stoma, and it is associated with significant morbidity and mortality. Therefore, adequate management of high output ECF and stoma is important. Administration of isotonic solution is one of techniques proven to be beneficial in reducing stoma output and allowing persistent luminal stimulation. We reported a case of high-ileostomy and ECF output in which isotonic solution conveyed improvement in clinical outcome.

Case Report: A 37-year-old woman presented with high output ileostomy following multiple and complex operations for ileum perforation which was constructed as loop ileostomy. Following the re-anastomosis of loop ileostomy, she developed a high output ECF and stoma over 1500 mL per 24 hours. The output reduced significantly in two days after administration of isotonic solution 1000 mL per 24 hours replacing the hypotonic fluid taken regularly. Following reduction of the output, electrolyte status was also consistently improving. Isotonic solution utilizes the sodium-glucose enterocyte transporter and the solvent drag following intracellular sodium and glucose transport. Isotonic fluid replacement is recommended to compensate the fluid loss and subsequently improve the electrolyte imbalance.

Conclusion: This case report demonstrated the success of isotonic solution administration in reducing the production of high ECF output. However, further research is warranted regarding the effect of routine isotonic solutions in cases of high output ECF.

Keywords: fistula, stoma, isotonic solution

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