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Nursing Care for A Patient on eVAC Treatment Aafter Anastomotic Leak. Case Report

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Abstract

Anastomotic leakage after colorectal surgery is one of the most significant and life-threatening complications. In recent years, all these complications have been more successfully and maximally sparingly managed by the application of endoluminal vacuum-assisted negative pressure therapy (e-VAC). In carrying out this treatment, the role of the nurse is fundamental in monitoring the therapy and determining the positive outcome of the treatment.

Keywords: eVAC Therapy, Nursing Care, Anastomotic Leak, Case Report

Introduction

A colectomy, or a colon resection, is a surgical procedure to remove all or part of the large intestine to treat or prevent diseases and conditions that affect the colon. These conditions may include cancer, bowel obstructions, diverticulitis, and Crohn's disease. In the past, open colectomy was considered to be the cornerstone operation, however, in recent years, less invasive laparoscopic colectomy has become more popular [1]. Surgical resection often combined with preoperative radiotherapy or radiochemotherapy is the standard treatment for patients with rectal cancer [2- 4]. Following operations involving colonic resection, an artificial connection must be made through a procedure called anastomosis, which can lead to anastomotic dehiscence or anastomotic leakage, which has been reported in the literature to occur with varying rates depending on the type, technique, and site of surgery among others [5].

Anastomotic leakage is one of the major complications of colorectal surgery, which might lead to reoperation, increased hospital stays, further intervention and mortality [6].

As a result of the potentially fatal effects of anastomotic leakages, a myriad of techniques and treatments have been developed to treat these unfortunate cases [5]. When perforations and postoperative rectal anastomotic leaks occur, the treatment still remains a challenge. Over the past few years, endoluminal vacuum-assisted closure (e-Vac) therapy has made a positive contribution to the treatment of these complications by using the principle of vacuum-assisted closure therapy of external wounds. The main advantage of this new procedure is to ensure continuous drainage of the abscess cavity, to promote and to accelerate the formation of granulation tissue resulting in a reduction of the abscess cavity [7].

For the successful course and outcome of treatment with endoluminal vacuum-assisted therapy, it is necessary to have conditions and activities performed by the medical team applying this therapy. Undeniably, the good preliminary preparation of the nurse assisting the doctor is a key moment for the good end result of the treatment.

Presentation of Case

The case is of a 59-year-old female patient with proven histological carcinoma of the middle third of the rectum. Neoadjuvant radiotherapy was performed. Surgical treatment follows without construction of a protective ileostomy and an anastomotic leak occurs (Fig.1). On the 19th day after the operation, severe pains began in the pelvic area with feverishness. On the 21st day after

the operation, a presacral abscess was diagnosed with maximum size 8cm (Fig.2). A transanal minimally invasive surgery (TAMIS) lavage was performed and an e-Vac therapy sponge was placed (Fig.3). The therapy continued with periodic replacement of the sponges for 1 month and after that the patient refused the therapy and the replacement of the sponges was discontinued. After 2 months, a new examination was performed and it's found out a large reduction in the size of the cavity and it is completely covered by granulation tissue (Fig.4 result).

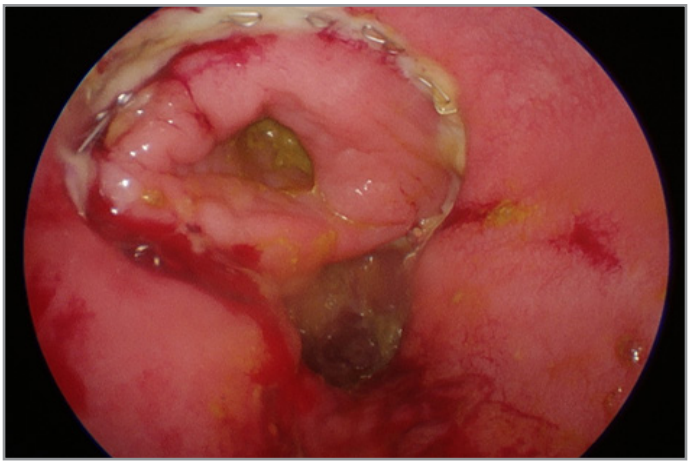

Figure 1: Anastomotic leak occurs

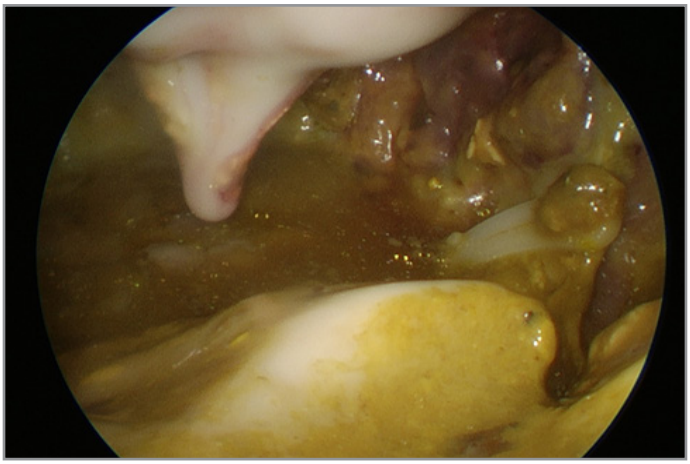

Figure 2: Presacral abscess

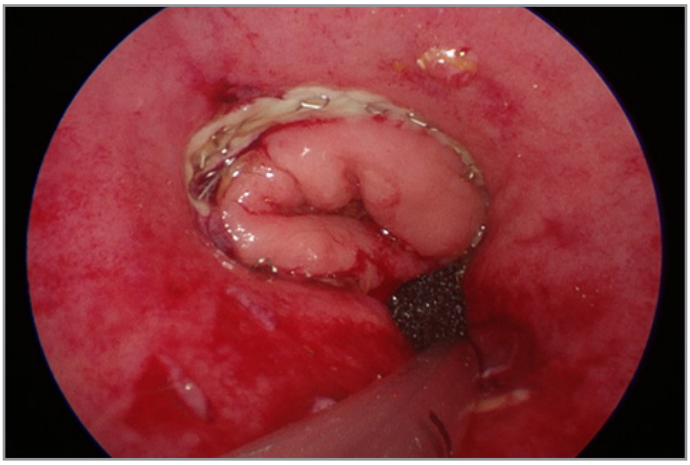

Figure 3: Perform an e-Vac therapy with sponge

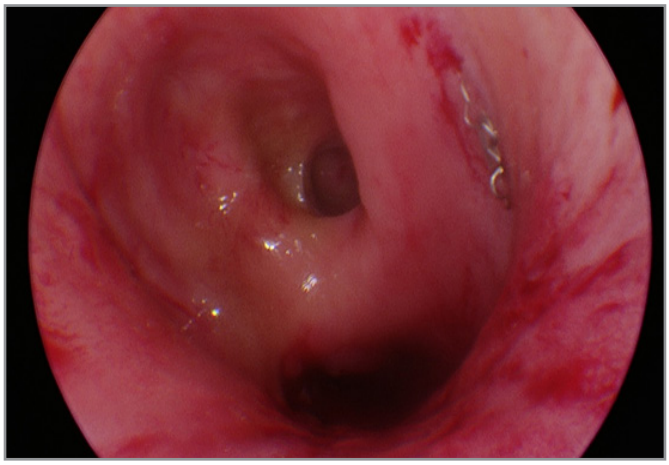

Figure 4: Result

Discussion

In this article, we review the nursing care of an e-Vac patient after an anastomotic leak as it relates to proper operation and care of the e-Vac therapy device. Treatment was performed with a KCI e-Vac device.

It is necessary to conduct preliminary training of the nurse and introduction with the technical and operational characteristics of the device.

The described care of the e-Vac device would ensure a long life of the device and lead to a positive outcome of the patient's treatment:

-Remove the canister from packaging and insert into the e-Vac therapy unit until it locks into place. NOTE: If the canister is not fully engaged, the e-Vac therapy unit will alarm.

-Turn on power to the e-Vac therapy unit. The clinician should select the prescribed therapy setting.

-Initiate e-Vac Therapy.

-The nurse periodically monitors the data on the pressure monitor and informs the attending physician if there is a deviation from the initially set values.

-The nurse monitors the status of the battery. When the battery is low, the device alarms and it must be connected to the power supply to charge. It is recommended to charge the battery of the device at night when the patient is at rest.

-The nurse monitors the 24-hour drainage volume, documents the data, informs the attending physician and transmits a report.

-When the canister is full, an alarm notification is activated. The nurse informs the attending physician and provides a new canister. The used canister is disposed of according to the requirements and protocol of the relevant medical facility. The date and time of the canister change shall be noted in the documentation;

-When the drainage pipe is blocked and impassable, an alarm notification is activated. It is the duty of the nurse to notify the attending physician. Washed with NaCl 0.9%. In the medical documentation, the date and time of the lavage is noted.

-The e-Vac device may be reused following cleaning and disinfecting per hospital protocol. KCI recommends the device to be cleaned and disinfected [8].

- If it becomes soiled during patient use
- At least weekly
- Between patient use

Conclusion

Proved with its advantages in recent years, e-VAC therapy in the treatment of anastomotic leaks is a sparing therapy, minimally invasive, improves the patient's condition, shortens the hospital stay and it is cost-effective, which is why this therapy is becoming more and more preferred for postoperative colorectal complications, such as anastomotic leakage. For its correct and high-quality implementation, the medical team and a well-trained nurse play an essential role.

Conflict of Interest Statement

The authors declare no conflicts of interest.

Consent for Publication

The patient signed informed consent forms.

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