

INTRODUCTION

There is growing evidence that the use of advanced active therapies, such as NPWT (negative pressure wound therapy), can be effective and improve outcome for patients when used earlier in the patient's care plan, rather than waiting for the wound to potentially deteriorate and become more difficult to treat or heal.

1. In particular, the use of single-use NPWT over closed surgical incisions have been shown to reduce surgical site infections, seroma and dehiscence, and to improve scar quality.

2. A patient- centered approach in preventing post-surgical dehiscence is vital in conjunction with the application of a smart NPWT device that is fully integrated, ultraportable, cost-effective and easy to use.

METHODS

The conventional approach to managing post-surgical incisions involves leaving the staples or sutures exposed to air. This method requires vigilant monitoring by the surgical team and nursing staff to detect any signs of infection, dehiscence, or other complications.

A total of over 20 patients (ICD-10 data) from several surgical groups who underwent procedures ranging from exploratory laparotomy to colectomy with intact post-surgical incisions were given smart NPWT device* for 6 days until the removal of staples or sutures at the surgeons' clinic. The smart NPWT device is a dressing featuring a simple pinch pump that is manually applied over the incision site.

*NPseal Negative Pressure Wound Therapy dressing

RESULTS

Patients were discharged postoperatively with the smart NPWT device in place, bypassing the usual delays associated with post-acute care referrals and insurance approvals. This strategy effectively reduced their inpatient stay duration. Upon their return to the clinic, the smart NPWT devices were removed. Notably, there was no evidence of surgical dehiscence or other post operative complications in any of the patients.



Smart NPWT device applied POD 1



Incision 12 days post-op

DISCUSSION

The implementation of the smart NPWT device demonstrated a notable efficacy in post-surgical care. Significantly, there were no instances of surgical dehiscence or related complications. Furthermore, the high level of patient satisfaction reported with the use of the smart NPWT device is indicative of its user-friendly and comfort. This aspect is crucial, as patient compliance is often a key determinant in the success of postoperative care regimens.