

PICO[◇] Single Use Negative Pressure Wound Therapy System (sNPWT) helped to significantly reduce the incidence of surgical site infections (SSIs) compared with surgical dressings in patients undergoing elective colorectal surgery

+ Plus points

↓ **53%**

relative reduction
in the incidence of
SSIs with PICO sNPWT
compared with surgical
dressings (p=0.02)



PICO sNPWT

reduced the odds
of developing SSIs
(OR=0.03; p=0.02)



**BMI 30-35kg/m² (p=0.04)
and ≥35kg/m² (p=0.03)
were risk factors** for SSIs

Overview

- Independent, prospective, non-randomized, cohort study conducted at a single Spanish center, assessing SSI incidence in elective open and laparoscopic open-assisted colorectal surgery
- Patients received either PICO sNPWT (n=100) or surgical dressings (OPSITE[◇] Post-op Visible dressing; n=100) for 7 days
- and were followed up weekly after discharge for up to 30 days post surgery
- Surgical dressings used were fully occlusive and allowed visibility of the wound site

Results

- Overall, there was a significant 53% relative reduction in the incidence of SSIs with PICO sNPWT compared with surgical dressings 30 days post surgery (p=0.02; Figure)
- Multivariable analysis demonstrated:
 - PICO sNPWT reduced the odds of developing SSIs (OR 0.30; p=0.02)
 - BMI 30-35kg/m² (OR 2.68; p=0.04) and >35kg/m² (OR 3.01; p=0.03), and midline incisions (OR 2.68; p=0.02) were associated with increased odds of SSIs
- Length of hospital stay with PICO sNPWT and control dressings was similar (12.33 vs 12.39 days; p=0.82); however, it was significantly longer for patients with SSIs than those without (Figure)

4.5
days

Longer hospital stay
in patients with SSIs
(16.21 vs 11.73 days; p<0.01)

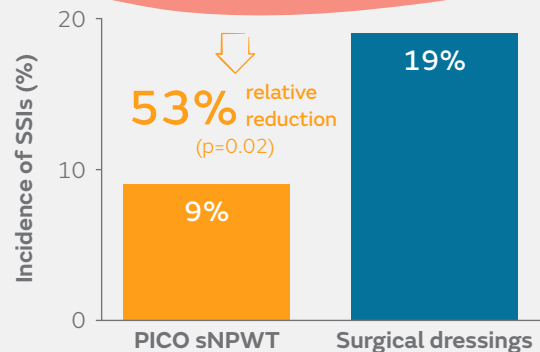


Figure. Incidence of SSIs (%) with PICO sNPWT and surgical dressings 30 days post surgery, and length of hospital stay in patients with and without SSIs

Conclusions

In patients undergoing elective colorectal surgery, PICO sNPWT helped reduce the incidence of SSIs compared with surgical dressings.

Citation

*Abadía P, Ocaña J, Ramos D, et al. Prophylactic use of negative pressure wound therapy reduces surgical site infections in elective colorectal surgery: A prospective cohort study. *Surg Infect*. 2020 Jun 10. [Epub ahead of print]. Available at: [Surgical Infections](#)

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