

PICO[◇] Single Use Negative Pressure Wound Therapy System (sNPWT) helped to reduce the incidence of surgical site complications (SSCs) and infections (SSIs) compared with standard dressings in patients undergoing incisional hernia repair via laparotomy

+ Plus points

44% significant relative reduction in SSCs with PICO sNPWT versus standard dressings (p=0.042)

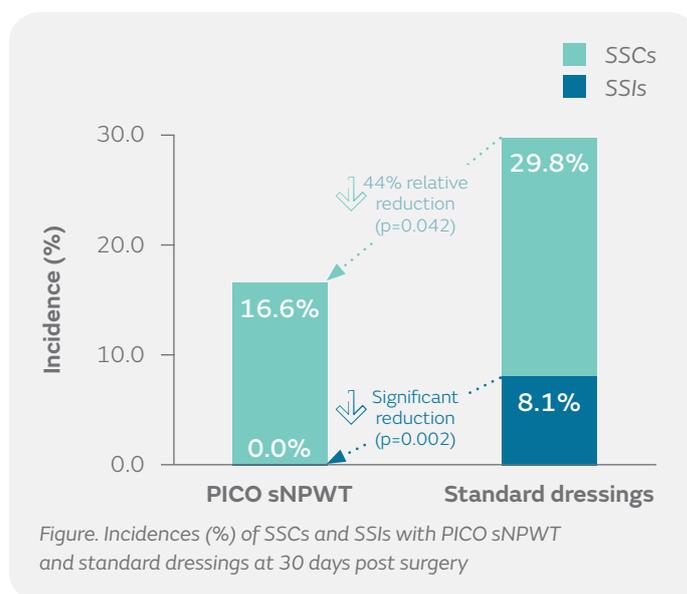
Zero patients experienced an SSI with PICO sNPWT compared with 6 patients with standard dressings (p=0.002)

Overview

- Independent, randomised controlled trial conducted at a single Spanish centre between May 2017 and January 2020 to compare the incidence of SSCs in midline elective incisional hernia repair via laparotomy
 - Patients had W2 or W3 incisional hernias, according to the European Hernia Society classification
- Patients received either PICO sNPWT (n=72) or standard dressings (n=74) following surgery
- Patients were observed for SSCs, including SSIs, wound dehiscence and seromas, up to 30 days post surgery

Results

- Treatment with PICO sNPWT significantly reduced the incidence of SSCs compared with standard dressings (12 vs 22 SSCs; p=0.042; Figure)
- There were no SSIs in the PICO sNPWT group compared with 6 cases with standard dressings (Figure; p=0.002)
- The incidence of wound dehiscence and seroma was similar between the two groups (both p>0.05)
- Mean length of hospital stay was 1 day shorter with PICO sNPWT compared with standard dressings but this was not significantly different (6 vs 7 days; p=0.154)
- Analysis demonstrated that the risk of developing SSIs:
 - Reduced with PICO sNPWT (p=0.001)
 - Increased with BMI >30kg/m² (p=0.002) and use of the anterior component separation procedure (p=0.001)



Conclusions

Use of PICO sNPWT helped to significantly reduce the incidences of SSCs and SSIs compared with standard dressings in patients undergoing elective midline incisional hernia repair via laparotomy 30 days post surgery.

Citation

*Bueno-Lledó J, Franco-Bernal A, Garcia-Voz-Mediano MT, Torregrosa-Gallud A, Bonafé S. Prophylactic single-use negative pressure dressing in closed surgical wounds after incisional hernia repair. *Ann Surg*. 2020, Nov 12;[Epub ahead of print]. Available at: [Annals of Surgery](https://doi.org/10.1093/annals/annab/000/000/000)

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