✚ Evidence in focus

Publication summary

Smith+Nephew

PICO◊ Single Use Negative Wound Pressure Therapy System (sNPWT) helped to significantly reduce the incidence of surgical site complications (SSCs) and reduce costs compared with standard care in patients undergoing vascular surgery

Wikkeling M, Mans J, Styche T. Single use negative pressure wound therapy in vascular patients: clinical and economic outcomes. *J Wound Care*. 2021;30(9):705–710.
Available at: Journal of Wound Care

Key points: With use of PICO sNPWT compared with standard care (prior practice):

63.6%
Significant relative reduction in SSC incidence (50.0 vs 18.2%; p=0.0011)

1.1 days
Reduced primary hospital length of stay

$783.86
per patient estimated mean total cost saving ($4,210.83 vs $4,994.69)

Overview

- A single-center, retrospective analysis of patients undergoing femoral endarterectomy to assess the impact on SSCs after introducing PICO sNPWT (from August 2016)
- A total of 108 patients were included in the analysis (PICO sNPWT, n=44; standard care, n=64)
- Data were extracted on SSCs (dehiscence, hematoma, seroma and surgical site infections [SSIs]), as well as healthcare resource usage
- For patient baseline characteristics with PICO sNPWT versus standard care:
  - Number of SSC risk factors was 1.8 and 1.9, respectively
  - American Society of Anesthesiologists score was 2.8 and 2.7, respectively
  - Significantly more male patients (79.6 vs 56.3%; p=0.01)
  - Hypertension was less frequent (68.2 vs 81.3%; p=ns)

Results

- Incidence of SSCs was significantly lower with PICO sNPWT than with standard care (50.0 vs 18.2%; p=0.0011)
- Incidences of dehiscence, hematoma and seroma were all lower with PICO sNPWT than with standard care (Figure)
  - SSI incidence was 4.5% with PICO sNPWT and 4.7% with standard care
- With PICO sNPWT versus standard care, there were reductions in:
  - Mean primary length of hospital stay (LOS; 5.60 vs 6.74 days)
  - Mean re-admission LOS (0.64 vs 0.92 days)
  - Mean number of outpatient visits after discharge (0.39 vs 1.0 visits)
- Anecdotally, clinicians reported that PICO sNPWT was easy to apply and operate
- Mean estimated total treatment costs per patient were 15.7% lower ($783.86) with PICO sNPWT than with standard care ($4,210.83 vs $4,994.69, respectively)

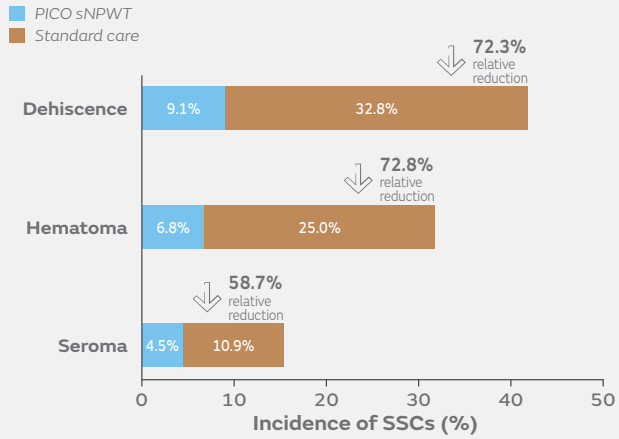

Figure. Incidence of SSCs in vascular surgery patients who received either PICO sNPWT (n=44) or standard care (n=64)

Conclusions

Use of PICO sNPWT significantly reduced the incidence of SSCs compared with standard care in patients undergoing femoral endarterectomy, as well as reducing hospital LOS and estimated mean total treatment costs.

Important Safety Information: The PICO pumps contain a MAGNET. Keep the PICO pumps at least 4 inches (10 cm) away from other medical devices at all times. As with all electrical medical equipment, failure to maintain appropriate distance may disrupt the operation of nearby medical devices. For full product and safety information, please see the Instructions for Use.

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