

The Effect of Preoperative Chlorhexidine Gluconate Cleanse on Lower Extremity Surgical Site Infections: A Retrospective Cohort Study

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Background

- Outpatient dermatology lower extremity surgical site infection rates are 6 – 10%
- Chlorhexidine gluconate has been used in healthcare for more than 50 years, covering various infectious organisms
- Mechanism of action: leakage of cytoplasmic cell contents and cell death

Objective

- To evaluate the rate of lower extremity surgical site infections following a recommended 14-day regimen of preoperative 4% chlorhexidine gluconate rinses and post-operative wound occlusion for 14 days
- If patients followed this regimen, no oral or topical antibiotics were prescribed

Methods

- Retrospective analysis of decolonization protocol
- Single surgeon
- January 2022 - June 2023
- Compliant:
 - 14 days chlorhexidine preop +
 - 14 days wound dry and clean postop

Reasons For Noncompliance

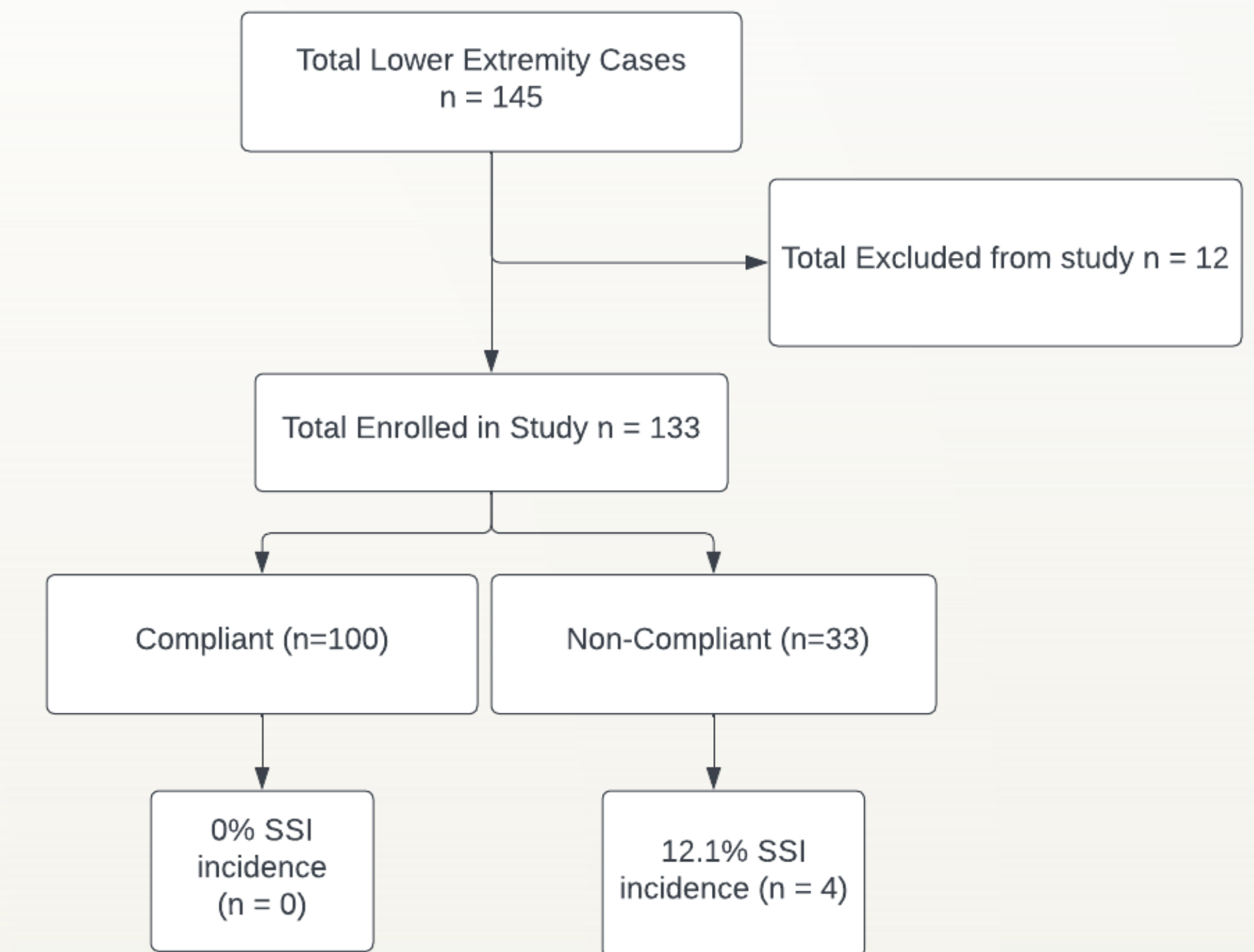
	All Patients	No Infection	Infection
Compliant	100	100	0
Noncompliant	33	29	4
Rinsed < 7 days	5	4	1
Rinsed ≥ 7-13 days	2	2	0
Wet Site Postoperatively Only	16	15	1
Rinsed < 7 days and Wet Site Postoperatively	7	5	2
Rinsed ≥ 7-13 days and Wet Site Postoperatively	3	3	0

Results

	Compliant (n=100)	Non-Compliant (n=33)	Total (n=133)
Past medical history of:			
Diabetes Mellitus	18	9	27
Immunosuppression	12	3	15
Size of wound defect			
median (cm ²)	2.55	3.24	2.6
range (cm ²)	0.64 - 23.03	1.56 - 19.8	0.64 - 23.02
Type of closure			
Primary Closure	90	22	112
Secondary Intent	7	9	16
Advancement Flap	2	0	2
Graft	1	0	1

- Compliance rate = 75.2%

Results



Conclusion

- Chlorhexidine gluconate preoperative rinsing combined with postoperative occlusion for fourteen days may minimize the risk of wound infection.
- An opportunity exists for adoption of this regimen into routine clinical practice in the outpatient dermatology setting.

Contact

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References

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