Efficacy of a Moisture-Wicking, Silver-Impregnated Textile in Hospitalized Patientswith Intertriginous Dermatitis (ITD)

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Background

Intertriginous Dermatitis (ITD) is an inflammatory skin condition under the moisture-associated skin damage (MASD) umbrella that develops between opposing skin surfaces, like in skin folds.[6]

Example of ITD in abdominal pannus skin fold

Purpose:

1. **Support evidence for efficacy of a moisture-wicking, ionic silver impregnated textile to treat intertriginous dermatitis (ITD) in hospitalized patients;**
2. **Determine perceptions of nursing staff about efficacy and ease of use.**

Methods

Design Single-case experimental design

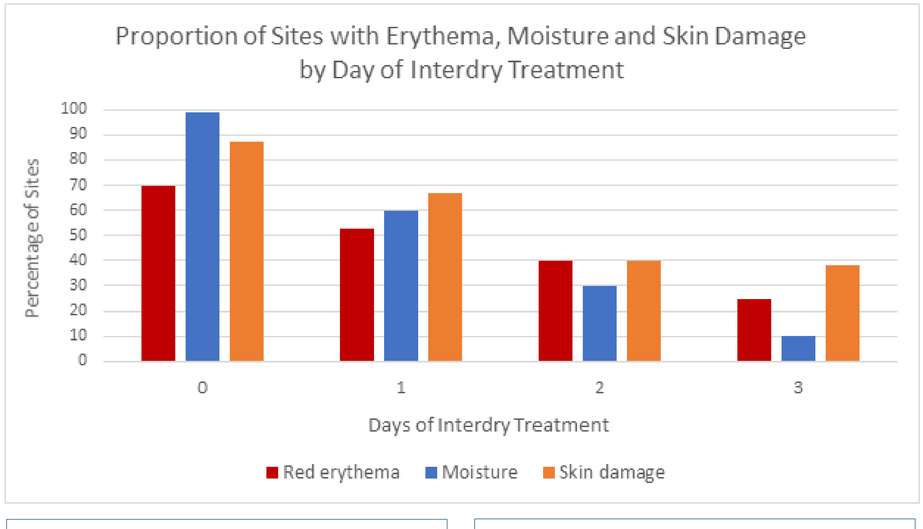
Study Sample 10 adult acute care inpatient participants enrolled between July and December 2021; 33 nurses provided their perceptions of efficacy and ease of use for the textile treatment

Study Procedures 30 participant ITD sites assessed daily for ITD signs (erythema, skin damage, moisture, exudate, presence of satellite lesions, and odor) and symptoms (pain, itching, and odor nuisance) for up to five days; new photograph of each site taken at baseline and daily. Attending nurses interviewed daily regarding textile ease of use and comparisons to previous treatments.

Descriptive statistics were used to summarize the patient sample according to clinical characteristics. Owing to the longitudinal repeated measurements of the patients in this sample, the method of generalized estimating equations (GEE) was employed to account for the clustering of measures within patients.

Results

Nine of the 10 participants had useable data and showed significant improvements in skin damage (p = 0.0011), satellite lesions (p = 0.02), exudate (p = 0.0037), odor (p = 0.012), moisture (p = 0.0006), and erythema (p = 0.0002) from day 0 to 3. Prevalence of any pain improved over time but not significantly (p = 0.17). The textile was reported “very easy to use” by 88% of the nurses.



Participant 5

Day 0

Day 3

Participant 8

Day 0

Day 5

Findings

Positive outcomes in this study support use of this textile in hospitalized patients and that nurses perceive the textile as easy to use.

Implications

Patients with ITD who are hospitalized may benefit from the use of the textile. Statistically significant decreases in five of the six studied signs and symptoms of ITD were shown within 3-5 days of use. Among the lessons learned, is the need for continued education about proper application of the textile to improve its consistent and appropriate use to maintain beneficial outcomes.

Limitations

- Small convenience sample may limit generalizability.
- Not all participants remained inpatient for the full five days of intended study assessment.
- Lack of a validated tool to assess ITD is potential limitation.
- Pain, itching, and odor nuisance scores had limited variability so could not be modeled.
- Continued education of nursing staff is necessary to improve its consistent and appropriate use to maintain benefits.

Recommendations

- Exploring effects of the textile on ITD in hospitalized patients in a larger sample over a full five days is needed to validate these findings.
- Investigation of textile use under medical devices.
- Study continuity of care with transition from inpatient-to-outpatient use and with use in any outpatient setting.

References

Use link or QR code to access full list of references: bit.ly/itdrefs

Study Contact

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Acknowledgements

Thank you to Mary Ann Friesen, PhD, RN, CPHQ, and Kristine Rowell, MSN, RN, FNP-C, for their support in this research.

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