Uses of a Novel New Absorbent Antimicrobial Polyurethane Foam Wound Dressing

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Introduction

Objectives:

- 1. Describe a new unique highly absorbent antimicrobial wound dressing
- 2. Identify the indications for use, versatility, and application of this new dressing
- 3. Describe the outcomes of 5 clinical case studies

Chronic non-healing wounds represent a problem for clinicians. The more difficult it is for chronic wounds to heal, the greater the potential burden to patients, their families, and the healthcare system. Treating wounds is most challenging when they become chronic. The prevalence of chronic wounds increases with age and compounding medical conditions. An estimated 6 million patients in the U.S. have chronic wounds, representing an estimated annual \$20 billion burden on the healthcare system¹. It is therefore important to effectively address wound concerns early and help prevent non-healing chronic wounds.

The purpose of this case series is to demonstrate the effectiveness of a novel new highly absorbent polyurethane foam dressing for both chronic wounds and its efficacy as a first line therapy. Clinical case studies will be presented that demonstrate the versatility and functionality of RTD™ Wound Dressing. This dressing is the only one on the market that contains known organic active ingredients integrated into the foam matrix; methylene blue (0.25 mg/g) and gentian violet (0.25 mg/g) plus a silver compound (Silver Zirconium Phosphate (7 mg/g)). This dressing provides sustained antimicrobial protection and is effective against a broad spectrum of gram negative and gram positive bacteria, yeast and fungi. It is a more effective antimicrobial than dressings that contain organic pigments (methylene blue and gentian violet) alone².

Method

Five clinical cases are described in terms of the presenting problem, duration, etiology and prior modalities used. All wounds were treated with RTD™ Wound Dressing. All wounds were followed through to full closure (Table 1).

Results

Duration of the wounds presented ranged from 14 days to 8 months. Wound types included, three surgical, one trauma and one drug eruption case. Time to heal ranged from 11 days to 7 weeks. All came to full closure. Many wounds had failed to heal with other wound dressings and modalities used previously (Table 1).

Table 1: Patient Demographics, Wound Etiology and Wound Healing Times

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Case	Wound Type	Etiology	Age	Duration	Products Used Prior to RTD™	Healing Time
1	Surgical	Non-healing following duplex scan	81	2 months	Therahoney/Cutimed, Versatel, Cutimed Gel	36 days (5 weeks)
2	Surgical	Non-healing post laminectomy infection and retained sutures	80	8 months	Multidex, Silvion, Alginate, Stimulen, Polymem	11 days
3	Surgical	Non-healing post-op, Removal of basal cell carcinoma	90	3 months	Multidex, Therahoney, Stimulen powder, Polymem, Arglase/Polysporin powder	51 days (7 weeks)
4	Leg Ulcer	Trauma	76	14 days	Multidex, Compression, Prisma, Silvion	40 days (6 weeks)
5	Leg Ulcer	Drug eruption reaction	88	4 months	Silvion and Silvaklenz	61 days (8 weeks)



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Discussion

The RTD™ Wound Care Dressing was found to be effective at closing a number of wounds that were non-healing; despite multiple other wound care interventions. By using this dressing as the first choice for treatment, this dressing could help to prevent wounds from becoming chronic and requiring advanced interventions such as systemic antibiotics, surgical debridement, enzymatic debridement, and negative pressure wound therapy. The addition of silver to this dressing enhances the antimicrobial properties that also have demonstrated benefits to improving wound healing³. Since this new dressing possesses both absorptive and antimicrobial properties, it creates an optimal environment for wound healing and helps to overcome the challenges of a compromised wound-healing environment.

Conclusion

This novel new antimicrobial dressing is effective at drawing protein rich wound exudate away from the wound, creating a healing environment and bringing difficult to heal wounds to closure. This versatile dressing was used throughout the continuum of healing and was easily integrated into facility wound treatment protocol. Initial experience has been primarily with non-healing wounds. It is recommended to use this dressing as a first line therapy, to minimize the risk of wounds becoming chronic and helping to reduce time to heal, thereby reducing the burden of non-healing wounds on the patient, their families and the healthcare system.









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