A BUSY METROPOLITAN WOUND CARE CENTER HAS SUCCESSFULLY INCORPORATED A ROLL ON TOTAL CONTACT CAST SYSTEM TO HEAL CHALLENGING FOOT WOUNDS

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OBJECTIVES

1. This case series will describe 14 patients that were treated with Total Contact Casting (TCC) to heal their challenging foot ulcers.
2. This case series will illustrate how integrating a scientifically proven modality such as TCC can lead to positive outcomes in healing diabetic foot ulcers in an appalling wound care setting.

METHODS

This series describes 14 patients with diabetic foot wounds. The wounds range in chronicity from 4 weeks to 1 ½ years prior to being treated with TCC. The clinic staff were educated on the use of the Roll on TCC System. Wound assessments, determination of hospital wound care therapy were made based on model wound healing principles. Foot wounds and Charcot foot arthroplasty were successfully off-loaded with the Roll on TCC System to produce optimal patient outcomes.

RESULTS/CONCLUSION

All 14 patients achieved complete wound closure after implementation of TCC. Several wounds were healed in 4-8 weeks. More complicated wounds took longer to heal as would be expected. This case series demonstrates successful treatment regimens involving neuropathic and other complicated foot wounds treated with the Roll on TCC System.

APPLICATION OF ROLL ON TCC SYSTEM

The clinical staff at this wound care center have incorporated casting so well that even casting a post TMA patient, as seen below, is not difficult or a time consuming process. Each component of application and removal only takes a matter of minutes.

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age</th>
<th>Gender</th>
<th>Diabetes</th>
<th>Foot Wound Location</th>
<th>Size of Wound (Length x Width x Depth)</th>
<th>Weeks to heal</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>38</td>
<td>F</td>
<td>Yes</td>
<td>Left Metatarsal Head</td>
<td>0.4cm x 0.3cm x 0.2cm</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>52</td>
<td>F</td>
<td>Yes</td>
<td>Right Great Toe</td>
<td>0.1cm x 0.1cm x 0.5cm</td>
<td>1</td>
</tr>
<tr>
<td>C</td>
<td>45</td>
<td>M</td>
<td>Yes</td>
<td>Left Metatarsal Foot</td>
<td>1.4cm x 0.6cm x 2.5cm</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>46</td>
<td>M</td>
<td>Yes</td>
<td>Left Lateral Foot</td>
<td>0.7cm x 0.3cm x 0.4 cm</td>
<td>3</td>
</tr>
<tr>
<td>E</td>
<td>46</td>
<td>M</td>
<td>Yes</td>
<td>Right Plantar Foot</td>
<td>2.1cm x 0.2cm x 0.3cm</td>
<td>5</td>
</tr>
<tr>
<td>F</td>
<td>56</td>
<td>M</td>
<td>Yes</td>
<td>Left Plantar Foot</td>
<td>1.5cm x 1.2cm x 0.4cm</td>
<td>5</td>
</tr>
<tr>
<td>G</td>
<td>47</td>
<td>M</td>
<td>Yes</td>
<td>Left Great Toe</td>
<td>0.9cm x 0.6cm x 0.2cm</td>
<td>5</td>
</tr>
<tr>
<td>H</td>
<td>69</td>
<td>M</td>
<td>Yes</td>
<td>Left Great Toe</td>
<td>1cm x 0.6cm x 0.2cm</td>
<td>6</td>
</tr>
<tr>
<td>I</td>
<td>68</td>
<td>F</td>
<td>Yes</td>
<td>Left Plantar Foot</td>
<td>1cm x 0.9cm x 0.4cm</td>
<td>7</td>
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<tr>
<td>J</td>
<td>49</td>
<td>F</td>
<td>Yes</td>
<td>Right Heel</td>
<td>4cm x 2cm x 0.7 cm</td>
<td>8</td>
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<tr>
<td>K</td>
<td>58</td>
<td>F</td>
<td>Yes</td>
<td>Left Medial Foot</td>
<td>5.3cm x 2.5cm x 0.6 cm</td>
<td>8</td>
</tr>
<tr>
<td>L</td>
<td>58</td>
<td>M</td>
<td>Yes</td>
<td>Left Plantar Foot</td>
<td>1.3cm x 1cm x 1cm</td>
<td>8</td>
</tr>
<tr>
<td>M</td>
<td>69</td>
<td>F</td>
<td>Yes</td>
<td>Left Plantar Foot</td>
<td>4.5cm x 1cm x 0.8cm</td>
<td>9</td>
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<tr>
<td>N</td>
<td>56</td>
<td>M</td>
<td>Yes</td>
<td>Right Transmetatarsal Amputation</td>
<td>2.4cm x 1cm x 0.6cm</td>
<td>12</td>
</tr>
</tbody>
</table>

PROBLEM

Over 29 million Americans have diabetes according to AHA 2013 statistics. Foot complications are the most common reason for patients with diabetes to be admitted to the hospital. Neuropathic foot ulcerations produce 8% of all non-traumatic lower extremity amputations.1 However mortality rates 5 years post lower extremity amputation are1

Despite this overwhelming evidence, TCC is considerably under utilized1 According to FDA’s recently published data from 66 wound care clinics, among the wound care clinics that use TCC, 68.3% of all TCC eligible ulcers did not receive1 TCC. There are many reasons that have been given for the underutilization. In contrast to the majority, this case series is representative of a busy metropolitan wound care clinic that has successfully incorporated a Roll on TCC System into practice to heal challenging foot wounds involving TMA and surgical wounds, heal wounds, and plantar neuropathic wounds as well as for Charcot arthropathy.

REFERENCES:


PATIENTS REPRESENTED IN THIS CASE SERIES

As illustrated in this chart, those wounds took an average of 6 weeks to heal. Some wounds took a considerably shorter or longer period of time to heal due to specific co-morbidities and other personal patient variables. This could be another area for further investigation. It is also noteworthy that this serious patient complication is not specific to the elderly, in fact the majority of the patients were in their forties and fifties with the youngest being eighty-four years old.

APPLICATION OF ROLL ON TCC SYSTEM

The patient was ready to go with their cast and boot for ambulation.

The wound had increased in size prior to the application of TCC.

The patient was turned to a prone position and the stockinette has been applied. The patient is ready to go.

The patient was turned to a prone position and the doctor is shown here rolling on the cast.

The stockinette was applied.

The TMA patient’s wound area was dressed and an extra layer application was applied to this patient’s area.

The stockinette was applied. The patient was turned to a prone position and the doctor is shown here rolling on the cast.

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