



Orthotech Professional

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TIP OF THE MONTH

Total Contact Casting Technique

by Robyn Masseth, OTC

Nearly 35% of diabetics experience ulcers of the foot and ankle at some time in their lives. Because many diabetics experience neuropathy or lack of sensation in their feet, many of them have abnormal pressure distribution when walking. Continuous pressure on the skin for even a short time can cause the skin to break-down and ulcerate. The dangers of an exposed ulcer can lead to infection, amputation and can also play a factor in the morbidity and mortality of patients.

It seems each year while attending NAOT's national symposium Total Contact Casting (TCC) seems to be a hot topic. There are many different techniques of TCC that have been shown throughout the years. Differences can include the use of plaster vs fiberglass, some use little or no cast padding, others may or may not enclose the toes.

Since the role of the OTC is so important, they must be open minded to trying new techniques, be willing to practice and become proficient, and to find what works best for them and their patients. After attending the 2006 symposium, I have found a method that, for me, is far above all others in results. Since last August I have had over 30 patients whom I have used this technique of TCC. I have had only one that did not heal and that was due to an underlying infection before the cast was applied.

This technique is specifically for plantar surface and heel ulcers. I did attempt to try this technique on a patient that had a mid-foot amputation where the incision was not healing. This did not gain any improvement.

A TCC is designed to reduce the shear forces and off-load pressure from the ulcer, giving the ulcer time to heal. The only way to completely do this is for a



Figure 1

patient to be on complete bed rest and not be allowed to put any pressure on the ulcer. However, since most patients cannot do this without it severely affecting their daily lives, a TCC is the next best thing.

In my opinion, the thing I like best about this TCC technique is that it allows patients to still be weight bearing. Patient compliance is now taken out of the equation when using this technique. I haven't had a single patient who has walked "too much."

At each visit the physicians will want to debride the ulcer of the old calloused skin. He may even choose to use a wound healing product to the area (Figure 1 above).

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However, if you do this, do NOT apply gauze dressings or a bandage to this area before the TCC is applied. Make sure any bleeding is stopped but we would still want the ulcer to be exposed, to get “total contact” with the cast.

MATERIALS NEEDED FOR THE TCC:

- 4” Stockinette Tape
- 1 roll - 3” Cast padding
- 1 roll - 4” Cast padding
- 1 pkg - 4x30 or 5x30 Primacast
- 2 rolls - 3” 3M SoftCast
- 2 rolls - 4” 3M SoftCast

For those of you who have never used Primacast, it is a synthetic splint material that has an excellent conformability. It leaves no creases or rough edges, alleviating any chance of causing further pressure areas. It also is extremely strong. For those of you who have never used Softcast, it looks exactly like a fiberglass, however when it is dry it is somewhat flexible.

APPLICATION

Step 1:

Apply the stockinette and cast padding as you would for a short leg cast. Remember to cut out the stockinette at the bend in the ankle, anteriorly, and tape.

Step 2:

Take the Primacast conformable splint and apply this to the posterior of the leg (Figure 2).



Figure 2

Secure the splint using the 4” Softcast from 2 inches behind the knee and rolling downward, wrapping exactly as you would for a short leg cast, using regular fiberglass (Figure 3).



Figure 3

While one hand is rolling, the other should be rubbing the Primacast conforming and shaping it to the leg.

Step 3:

Next use 3” Softcast to secure splint to plantar surface of the foot incorporating the ankle and previous roll. Make sure to continue to conform the Primacast especially to the site of the ulcer.

Bring the Primacast splint to the base of the metatarsals. If there is any excess splint material, either cut or fold it back. I usually fold this back under the plantar surface if I have an extra large patient and I feel they need more support.

Step 4:

Fold back the stockinet at the top of cast and at the toes. Finish off the cast with the last 2 rolls of the Softcast.

Step 5:

Give the patient a cast shoe for walking and to protect the integrity of the cast (Figure 4).

Essentially when you are done, you have a posterior splint secured within a short leg cast. The Softcast combined with the Primacast conformable posterior splint takes the sheer force away, allowing the patient to walk. This gives a rigid enough surface that

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allows the patient to walk and yet, the flexibility of the Softcast moves with the patient and does not cause any rubbing in other areas.

You should continue to do weekly cast changes to watch for problems or signs of infection. It is amazing to see the amount of healing that can occur in a week. I would challenge any OTC, that if you're not happy with your TCC technique, to try this one.



Figure 4

ABOUT THE AUTHOR



Robyn Masseth, OTC, has worked for Meritcare Medical Group in Fargo, ND for the past 20 years. She has been an active member of the National Association of Orthopaedic Technologists (NAOT) since 1994 and has served as the publications chairperson for the NAOT Journal for the past three years. In 2006, Robyn was part of a volunteer medical mission in Ecuador, where multiple orthopedic surgeries were performed for children who would otherwise never receive treatment.

QUESTIONS FOR CEU CREDIT: Aug/Sept 2007

TOTAL CONTACT CASTING TECHNIQUE

Please answer the questions in the space provided below and return to NAOT via mail, fax or email (see information below) to receive 1 CEU (Category 2).

1. Why do nearly 35% of diabetics experience ulcers of the foot and/or ankle?

2. What is TCC specifically for?

3. For the TCC technique, why would you not want to apply gauze dressing or a bandage to the ulcer?

4. Explain Figure 3.

5. Why would you continue to do weekly cast changes after the cast is put on?

Name _____

Email address _____

NAOT Member No. _____

OTC Number _____

Return to NAOT
 via fax at (317) 205-9481 or mail to:
 8365 Keystone Crossing, Suite 107
 Indianapolis, IN 46240.

This information may also submitted on-line at
www.naot.org/onlineceus.html.

RECORD 330 ATTENDEES AT NAOT 2007

Thanks to all the NAOT members who participated in our 25th Annual Clinical Symposium in Charlotte, NC this past August. A record 330 attendees made this conference the largest in association history. Special thanks to **Joe Davis**, 2007 Local Organizing Chair, for his efforts in securing many of the general session speakers that provided informative educational presentations. We would also like to recognize the **Carolinas Association of Orthopaedic Technologists (CAOT)** for their efforts in serving as “host” for the 2007 symposium.



A few notes and highlights from the meeting: **Sean Conkle** and **Sue Turcotte** were re-elected to their respective posts as NAOT Vice President and Secretary during NAOT’s Annual Business Meeting...**Jeffrey Summerhill** and **Reinhard Bartel** were the 2007 winners of the Exhibitor Draw Card, which encouraged attendees to visit all of the 32 exhibitors on-hand for meeting. Summerhill will receive a free registration to NAOT’s 2008 conference in Minneapolis, which Bartel received \$100 cash...NAOT kicked off a new **Compensation and Benefit Survey for Orthotechs** at the conference, with over 100 responses collected. If you didn’t fill one out, please take a few minutes to do so using the survey on the following pages or go on-line to naot.org...**Jason Davidson** was appointed as the state delegate from Alabama. Two new At-Large positions were created in Charlotte – **Al Ramirez** for Georgia/Florida and **Sabrina Rand** for Oregon/Washington. If you are interested in helping Al or Sabrina to organize associations in these areas, please visit naot.org and click on “About NAOT” and then “State Delegates” for their contact information. NAOT Treasurer **Robin Priestly** was inducted into the association’s Honors Society during the Closing Banquet.

CALL FOR SPEAKERS AND SESSIONS – NAOT 2008

Are you interested in speaking at NAOT 2008? Do you have recommendations for a topic or speaker? Do you have relationships with orthopaedic surgeons or professionals who would be dynamic speakers during our plenary sessions? If you answered “yes” to any of the questions above, please contact Andrea Watson, NAOT’s Meeting Manager, at (317) 205-9484 or naot@hp-assoc.com as soon as possible. We are accepting proposals for sessions through Friday, September 21, 2007.

FIND THE FOLLOWING SPEAKER PRESENTATIONS ONLINE AT: www.naot.org/annualsymposium.html

- | | |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Ankle Fractures in Adolescence
Kenneth Niblack, OTC | The Mitten Cast (AKA “Club Cast”)
Andrea Stephens, OTC, OPA-C |
| Dynamic Bracing of ACL Deficient Knees
Gary Bledsoe, Bledsoe Brace Systems | MRSA: Methicillin Resistant Staphylococcus Aureus
Marie Stelmach, RN, CIC |
| Evolution of Fracture Management
James Kellam, MD | Pediatric Hip Disorders
Steven Frick, MD |
| Femoral Fracture Spica Cast: The FRC Technique
David Gallant, OTC, RN | Throwing Injuries in the Athlete
Doug Wyland, MD |
| Assessment of Lower Extremity - Knee
Katherine Bagnato, OTC, ATC | Total Joints: Knee & Hip
David Mauerhan, MD |
| Care and Outcomes Following Severe Lower Extremity Trauma
Michael Bosse, MD | Wound Management
Suzanne Collins |

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2007 Orthopaedic Technologists COMPENSATION SURVEY

NAOT is asking for your help in calculating the average salary for ortho techs based on factors such as geographic location, experience and certification. This survey will help NAOT provide OTs with a general idea of the salary range in their area. Results will be published in an upcoming issue of the Orthotech Professional.

Participation is important. We want to get a true picture of salaries and benefits among ortho techs across the country, so we will need a broad response to the survey. Your responses will be confidential. Please complete the survey by November 1, 2007 and fax to NAOT at (317) 205-9481 or mail it back to the address provided. Surveys can also be completed online by visiting www.naot.org and clicking on the "2007 Salary Survey" icon. Thank you.

Section 1 - Location

1. Geographic area of the country where you are located (check one):

- Northeast Southeast Midwest
 Northwest Southwest West



State in which you work _____
(list two letter abbreviation)

2. Where are you employed?

- Hospital Private Practice Clinic Military Other (please list) _____

Section 2 - Education & Certification

1. What is your highest level of education?

- High school Some college courses Associate degree Bachelor degree
 Other (please list) _____

2. Please check the certifications that you currently hold (check all that apply):

- OTC OT-SC OPA-C RN RTR ATC
 Other (please list) _____

3. Number of years you have been certified as an OTC (choose one):

- Not certified 2 yrs or less 3-5 yrs 6-10 yrs 11-15 yrs 16-20 yrs 20+ yrs

Section 3 - Experience & Supervision

1. Years of OT experience _____ (please round up to nearest whole number)

2. Years with current employer _____ (please round up to nearest whole number)

3. Are you the lead orthotech in your group? Yes No

4. If yes, please indicate the number of orthotechs you directly supervise. _____

Section 4 - Compensation

1. Employment status (choose one):

- Part-time/hourly Full-time/hourly Full-time/salaried

2. Number of hours worked per week _____

3. What is your annual income (choose one)?

- Less than \$20,000 \$20,000 - \$25,000 \$25,001 - \$30,000 \$30,001-\$35,000
 \$35,001 - \$40,000 \$40,001 - \$45,000 \$45,001 - \$50,000 \$50,001-\$55,000
 \$55,001- \$60,000 \$60,001 - \$65,000 \$65,001 - \$70,000 \$70,001-\$75,000
 \$75,001- \$80,000 \$80,001+

4. Do you receive compensation for an after-hour call (call pay)? Yes No

5. If yes, how much does this increase your compensation per year:

- Less than \$1,000 \$1,000 - \$3,000 \$3,000 - \$5,000 More than \$5,000

Section 5 - Benefits

Does your employer offer (circle one choice for each question):

- | | | | |
|----|-------------------------------------------------------------------------|-----|---------|
| 1. | Health Insurance | Yes | No |
| | Contributory? (Employees pay in) | Yes | No |
| | If insurance is contributory, how much in dollars do you pay per month? | | _____ |
| 2. | Life Insurance | Yes | No |
| | Contributory? | Yes | No |
| 3. | Flex-time provision | Yes | No |
| 4. | Pay for professional organization dues | Yes | No |
| 5. | Pay for professional education/conferences | Yes | No |
| | If employer pays for education, please indicate the amount per year | | \$_____ |
| 6. | Employment contract? | Yes | No |
| 7. | Retirement program? | Yes | No |

Section 6 - Miscellaneous

1. Please check membership status: NAOT Member Non-Member

2. Please include any additional comments that you have here. _____

NEWS FROM ORTHOTECH SCHOOLS

CLARK EARNS GROSSMONT STUDENT HONOR

In early June, the Grossmont College ROP Orthopedic Technology Program presented its 2007 Outstanding Student Award to Shannon Clark. The award is given to the student who best demonstrates the qualities and character that makes a good patient care professional. According to Tom Byrne, OTC, Grossmont's lead instructor, "Shannon's communication skills, ability to translate theory to practical application as well as her sense of empathy and professionalism made her one of the three finalists. It was her sincere focus on becoming a Certified Orthopedic Technologist and being the best at that specific profession that made her the final choice."



Shannon Clark (center) receives the Outstanding Student Award from Chris Leventis (left) and Bill Bull (right).

Byrne indicated that Clark received a \$1,000 scholarship to attend NAOT's recent national symposium in Charlotte, courtesy of Bill Bull, Western Regional Manager for Ossur Americas - Orthopaedics and Chris Leventis, President of OrthoPlus. "Not only have they given Shannon the great opportunity to attend a national meeting," stated Byrne, "but they are also primary providers for materials for Grossmont's Orthopedic Technology Program's Lab."

FIRST SCHOOL ASSOCIATION FORMED AT GRIFFIN TECH

A group of students in the Orthopedic Technology program at Griffin Technical College in Griffin, GA have submitted formal paperwork to NAOT to be recognized as the organization's first school-based association. With the help of Donald Burgess, Griffin's program coordinator, the students have written bylaws, elected officers and started to organize meetings on its campus. The Association of Orthopaedic Technologists of Griffin Technical College (AOTGTC) will be led by Gerita Cook, who will serve as President. According to Millicent Goodridge, AOTGTC's Secretary, the officers will initially be students from Griffin's first graduating class, scheduled to finish in September 2007. "This will allow incoming students to focus on academic achievements, while still being a participants of the charter, but without the responsibility of heading the program," she stated. Goodridge indicated that they would be active in fundraising, program publication, pinning service and any on-going engagements.

MONTGOMERY PROGRAM NOW UNDER BLUE ASH MANTLE

The Orthopedic Technology Training Program formerly held at Montgomery College in Houston, Texas has moved locations and will now be offered at the Blue Ash Education Center, also located in Houston. For more information about the program, please contact (281) 872-8700 or admissions@orthotechtraining.com.

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UPCOMING EVENTS

NAOT ASOPA 2008



NAOT's 26th Annual Clinical Symposium
ASOPA's 32nd Annual Meeting

**June 27-30, 2008
Minneapolis, MN**

CASTING & SPLINTING SKILLS WORKSHOPS

EAST

October 20-21, 2007

Sheraton Cleveland Airport Hotel
Cleveland, OH

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*Creative Technologies
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For more information please visit:
www.naot.org/castingworkshops.html

