Controlled Under Pressure: A Super-Absorbent Polymer Dressing* (SAPD) to aid in Exudate Management During Lymphedema Compression Therapy

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Statement of Clinical Problem:
The single most important component in the treatment for lymphedematous limbs is therapeutic compression (International Lymphoedema Framework, 2012). However, if a patient with lymphedema has a weeping wound, maintaining therapeutic compression for 24 hours a day becomes challenging. Patients may be prompted to remove their compression bandages if their wound feels irritated and uncomfortable, if they suspect maceration, skin breakdown, or infection. Once removed, limb swelling will re-occur, progress is stalled, and wound enlargement can occur.

Description of Clinical Treatment Approach:
In attempt to mitigate the aforementioned problems and allow uncompromised compression therapy between twice weekly appointments in the lymphedema clinic, a super-absorbent polymer dressing (SAPD) is placed on open and draining areas. The SAPD dressing pulls in fluid from the skin, keeping the skin clean and healthy while preventing discomfort from wet bandages or dressings. The intended result would be that the treatment regimen is more comfortable and compression therapy can continue uninterrupted, with the secondary result being wound healing and edema reduction.

Patient Outcomes:
Use of a SAPD allowed for wound care and lymphedema compression treatment concurrently for 24 hours a day. The amount of exudate varied widely between the 3 cases, yet the SAPD was able to absorb, conform, and support healing while maintaining comfort for the patient. Furthermore, extending time between dressing and compression changes allowed for reduction in wound size and edema.

Conclusion:
The healthcare environment today appears to be reducing the amount of visits patients receive, requiring a practitioner to achieve more results with less time. Using a SAPD helped to reduce visits where patients return to the clinic out of concordance with compression therapy and helped with continuity in patient’s care.

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Patient #1 had a left leg wound (lymphedema/venous origin) that was treated with a SAPD dressing, barrier cream, short stretch bandages and other wrapping materials. The patient was able to keep her lower leg compression on 24 hours a day with only 2 clinic changes a week for 7 weeks, resulting in 98% wound closure. The patient was able to transition to home compression garments at this time due to her compliance with compression. Additionally, edema reduction goals were met as the patient lost an average of 6.6 cm of girth at each measurement point when discharge measurements were compared to initial evaluation measurements.

Patient #2 had bilateral leg wounds related to trauma to the skin and lymphedema. Prior to treatment in clinic, Patient 2 was treated with compression bandages for 2 months but was unable to consistently keep compression on due to the wound exudate necessitating changes daily. Patient was treated in the clinic with antimicrobial AG dressings, SAPD’s, barrier cream, and short stretch bandages with wrapping materials. Patient was unable to keep compression during the first week due to her bandages becoming saturated with wound exudate, even with a SAPD. However, after layering 2 SAPD’s to absorb the drainage, patient was able to keep bandages on until her next wound care appointment and continued to do so over the next 13 weeks.

During the aforementioned time period, the patient’s right lateral malleolus wound reduced by 52%. The patient’s left lateral leg wound reduced by 91% and the left lateral malleolus wound reduced by 46% over the 13 week period. Additionally, the patient’s right leg demonstrated a reduction of edema with an average loss of 3.93 cm at each measurement point and the left leg girth measurements showed an average reduction of 2.57 cm.