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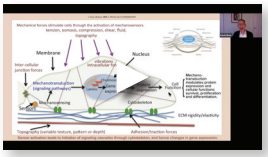

Mölnlycke Sponsored Learning: Setting a New Standard in Advanced Wound Care the Flex 360° Revolution: A Clinical Case Series

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Kevin Woo is a Professor at Queen's University, Faculty of Health Sciences in Kingston, Ontario. He is a leading Canadian researcher in the areas of wound care and chronic disease self-management. He has served on expert panels and advisory boards to develop Best Practice Recommendations and received awards for his contribution in wound care. He is also a web editor for the Advances in Skin and Wound Care website and the president of the Canadian Pressure Injury Advisory Panel.

The Burden of Pressure Injuries

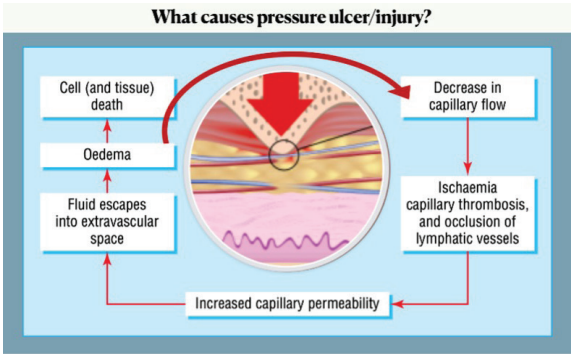
Pressure injuries (PIs) are common across different health-care settings, especially among patients who are hospitalized. The incidence of PIs in hospitalized patients was found to be ~12%.[1] PIs are costly to patients and health-care systems. Amid the ongoing COVID-19 pandemic, there is a rise of medical device-related pressure injuries (MDPIs). Galetto et. al. found that the prevalence of MDPI was ~62%.[2]

Pathophysiology of Pressure Injuries

PIs are a result of direct pressure, shearing forces and soft tissue deformation. These forces combine to cause a decrease in capillary flow, which leads to capillary thrombosis, ischemia and lymphatic obstruction. Edema then occurs as a result of increased capillary permeability and can cause cell and tissue death. Edema can also lead to decreased capillary flow. Lustig et. al. found that the combined effects of ischemic cell damage, inflammatory edema-related cell damage and direct deformation cell damage lead to exponential cumulative skin damage and rapid damage progression in PIs.[3]

Risk Factors for Pressure Injuries

Risk factors for PIs include mechanical boundary conditions, susceptibility and tolerance of individuals, internal strains and stress and damage threshold. A key intrinsic risk factor to PIs is nutrition. Patients with very low or very high BMIs are at a higher risk for PIs.[4,5] It is important for clinicians to remember that obesity does not always equate to the patient being well-nourished.



Focus on Prevention

The best way to heal a wound is if the wound never existed in the first place. Prevention is key when it comes to PI management. A bundled approach, such as S-Skin (Table 1), can be helpful in planning PI prevention strategies.

Table 1. Pressure Injury Prevention Strategies

S	Surface
S	Skin inspection
K	Keep moving
I	Incontinence and moisture management
N	Nutrition (including hydration)

Prophylactic foam dressings have been found to be beneficial for the prevention of PIs. The National Pressure Injury Advisory Panel (NPIAP) recommends the use of:[6]

- Silicone multi-layered dressings to protect the skin for individuals at risk of pressure injuries
- Prophylactic dressings as an adjunct to heel offloading and other strategies to prevent heel pressure injuries
- Prophylactic dressings beneath a medical device to reduce the risk of MDPIs

Challenges for dressing selection for the management of pressure injuries include pooling of wound exudate, lack of conformability and comfort, infection and leakage and wound maceration. Foam dressings that can redistribute shear, pressure and friction and manage wound microclimate are ideal for the prevention and management of PIs.

Mepilex® Border Flex

The Mepilex® Border Flex dressing consists of five

layers: a wound contact layer, a foam pad, a dispersion layer, a drainage retention layer and a waterproof/vapour-permeable film backing. This dressing comes in different shapes and sizes to accommodate different wound types and anatomy. There are "Y" shaped cuts to allow for 360° stretch. The Flex technology allows the dressing to be conformable to accommodate different anatomy and prevent early dressing detachment. The SafeTac® soft silicone wound interface technology results in less painful dressing changes and reduces the risk of maceration. The waterproof film backing allows patients to leave the dressing on while showering and bathing.

The Mepilex® Border Flex dressing retains its shape despite normal weight and shearing forces.[7] It has excellent fluid handling capacity (FHC) and proposed bacterial trapping action due to its exudate-absorbing properties. It has high axial stiffness.[8] This allows the dressing to distribute tissue loads better to prevent PIs. However, when a dressing is too stiff (especially around the borders), it can cause skin damage. The Flex technology reduces stress on the border of the dressing by an average of 20% compared with similar dressings, reducing on skin damage around the borders of the dressing. Importantly, the SafeTac® technology allows for atraumatic dressing removal.

In a recent study, the Mepilex® Border Flex and Mepitel® One were observed to be effective for the treatment of type 1–3 skin tears. The complete wound closure rate for these silicone dressings compared with non-adherent, non-silicone dressings with Alldress was significantly higher at one, two and three weeks.[9] The wound closure rate at week 3 was 96.9% for the silicone dressings compared with 34.4% for the control dressings.[9]

How to Choose a DRESSING?	
D	Diameter and depth of the wound
R	Resources available
E	Exudate (amount and viscosity)
S	Site (contour, movement, contaminantion)
S	Surrounding areas (skin and beyond)
I	Infection and/or biofilm management
N	Necrotic or non-viable tissues
G	Goals: Is the wound healable, maintenance or non-healable?
S	Suffering (pain and related symptoms)
?	Questions from patients and/or caregivers

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