

MANAGING MASD

**28
APR**



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CANADA



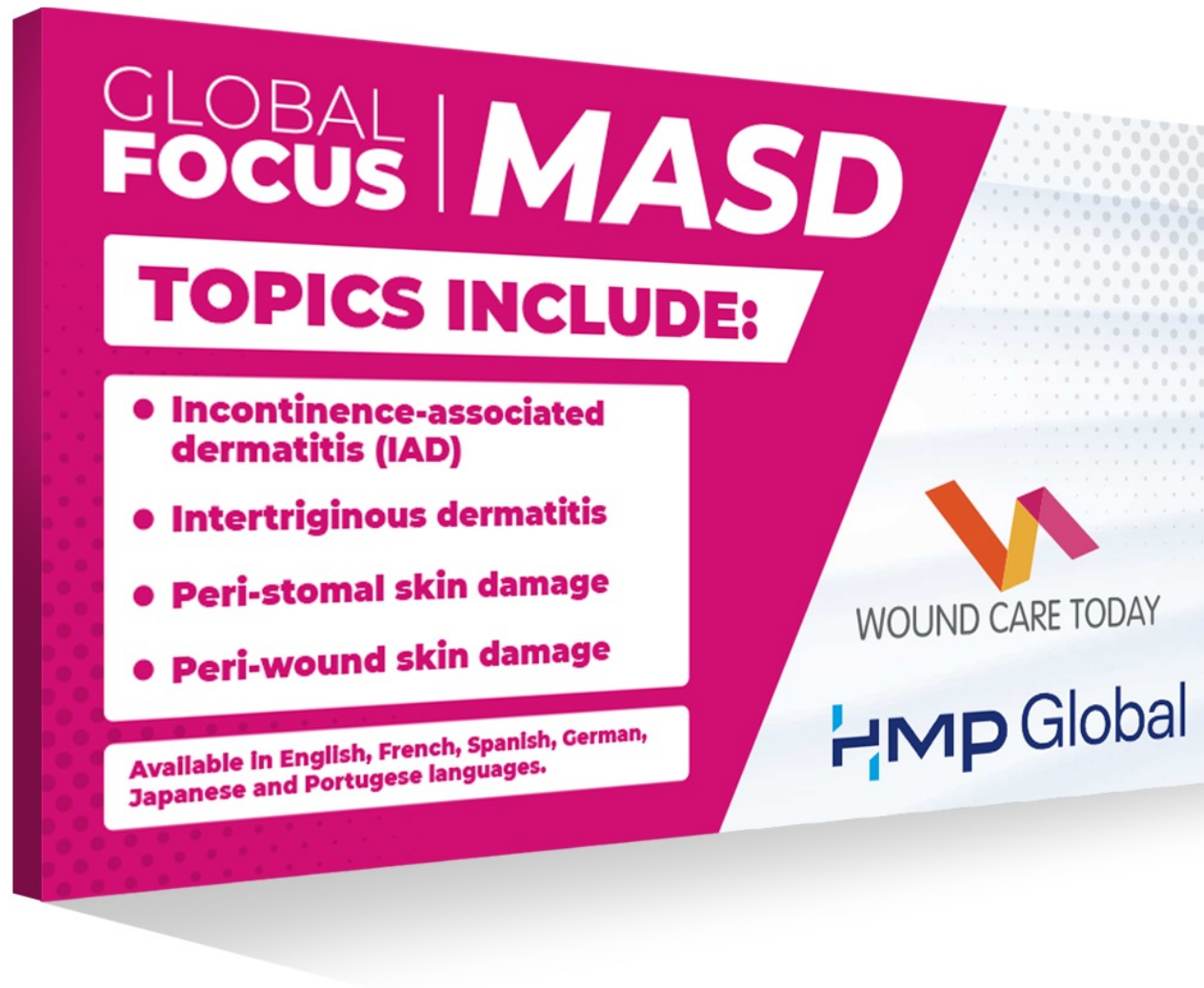
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LEARNING OBJECTIVES

-  To understand prevention and management strategies for each clinical manifestation
-  To understand the components of structured skin care
-  To understand when, where and how to use skin cleansing, moisturising and barrier products.

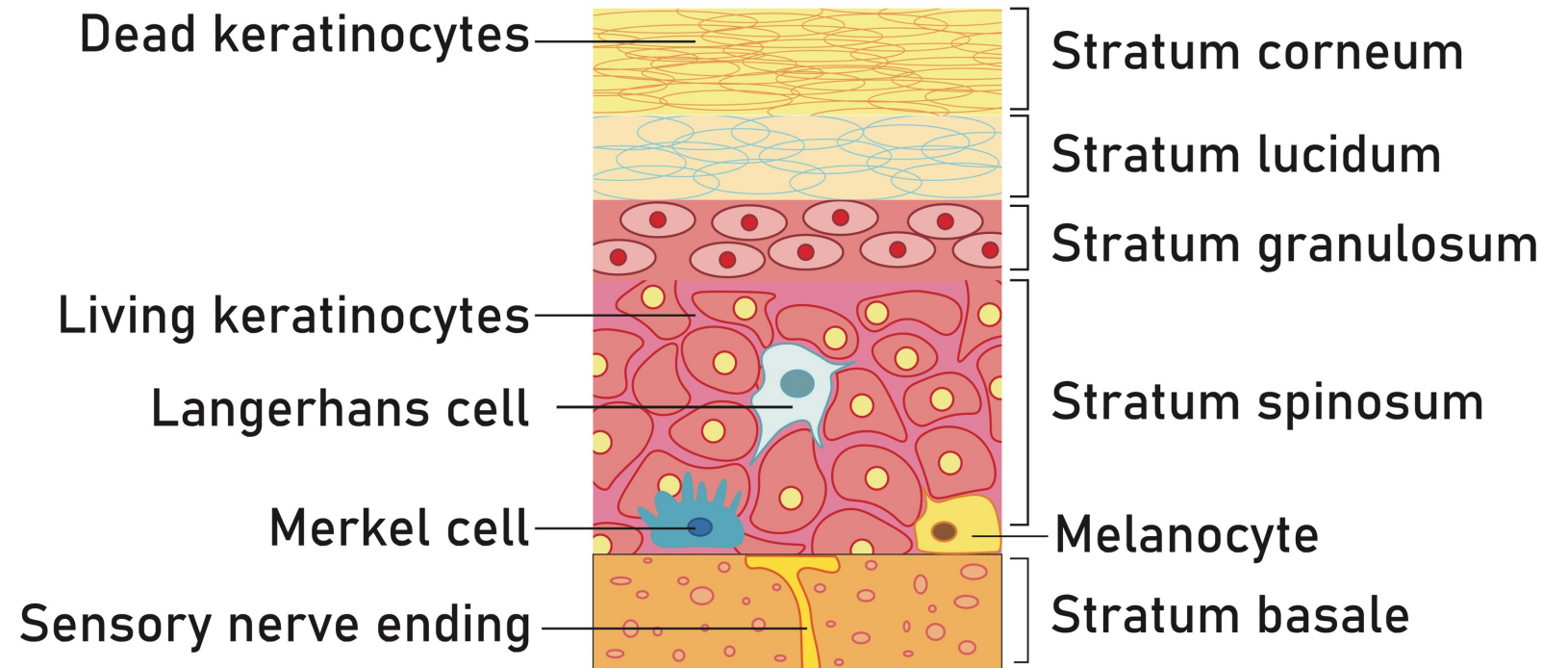
INTRODUCTION

In the first Facebook Live on recognising MASD we learnt that:

- Moisture plays a key role in damaging the skin barrier by disrupting the structure of stratum corneum
- MASD comprises four clinical manifestations
- The difference between them is the type of moisture that induces damage
- Early assessment and detection is key to proactive prevention.

- Epidermis is avascular – entirely dependent on dermis below
- Made up of five layers – different maturity of keratinocyte.

THE SKIN: EPIDERMIS



EPIDERMIS: STRATUM CORNEUM

Stratum corneum (Beeckman et al, 2015; Boer et al, 2016):

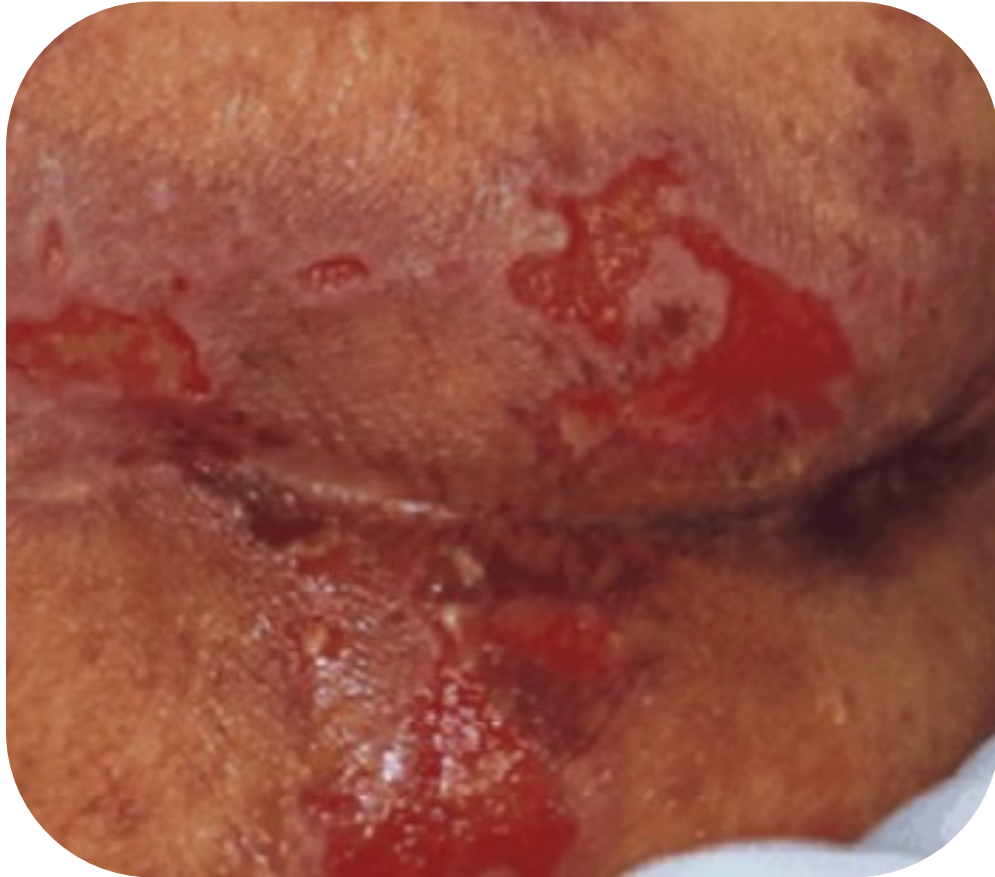
- 15–20 layers of fully cornified keratinocytes – corneocytes
- Top part – layers arranged loosely and undergo scaling and shedding
- Bottom part – cells closely joined together with desmosomes
- Corneocytes embedded in intercellular lipids
- Corneocytes contain a natural moistening factor.

FOUR CLINICAL MANIFESTATIONS

- 1 Incontinence-associated dermatitis
- 2 Intertriginous dermatitis
- 3 Periwound moisture-associated dermatitis
- 4 Peristomal moisture-associated dermatitis

INCONTINENCE- ASSOCIATED DERMATITIS

INCONTINENCE-ASSOCIATED DERMATITIS



- Incontinence-associated dermatitis (IAD) describes the skin damage associated with exposure to urine, stool or a combination of these in adults (Beeckman et al, 2015)
- Identifying those at risk and implementing prevention care is key (Fletcher et al, 2020).

INCONTINENCE-ASSOCIATED DERMATITIS



The prevention and management of IAD involves:

- Continence assessment and management to minimise the risk of skin coming into contact with urine and/or faeces
- Regular skin assessment for signs of IAD
- Structured skin care to protect vulnerable skin and help replenish the skin's barrier function
- The use of gentler cleansing, moisturising and applying a skin protectant (Beeckman et al, 2015; Flanagan, 2020).

MANAGING INCONTINENCE

- Thorough assessment and continence promotion
- Treatment of reversible causes
- If continence enhancement not possible – suitable continence products
- Involve the continence team/multidisciplinary team
- Temporary use of an indwelling catheter
- IAD can be exacerbated by a delay in cleaning, incorrect/infrequent product use and blocking of absorptive capacity by skin products (Beeckman et al, 2015; Young, 2017; Flanagan, 2020).

IMPLEMENTING STRUCTURED SKIN REGIMEN

- Use a cleanser with a mild surfactant and consider cleansing techniques; soap and water should be avoided to maintain the skin's normal pH
- Skin of patients who are incontinent should be cleansed at least once daily and after each episode of faecal incontinence
- For patients at risk for IAD, use a skin protectant/barrier cream to repel moisture and irritants
- For patients with IAD, use a skin protectant/barrier cream that can alleviate pain or improve comfort (Beeckman et al, 2015; Fletcher et al, 2020).

UNIVERSITY HOSPITALS OF LEUVEN

The problem:

- No data/numbers
- Increased wound care consultations
- Difficulties in clinical practice
- Differentiating between IAD and pressure ulcers and other skin conditions.



A NEW PROTOCOL

- A new classification tool GLOBIAD
- New advanced elastomeric skin protectant
- Our goal – implementation of a new, simplified, evidence-based protocol.

GLOBIAD
Ghent Global IAD Categorisation Tool

Categorie 1: Aanhoudende roodheid		Categorie 2: Ontvelling	
1A - Aanhoudende roodheid zonder klinische tekenen van infectie	 <p>Essentieel criterium</p> <ul style="list-style-type: none">• Aanhoudende roodheid<i>Verschillende tinten roodheid kunnen aanwezig zijn. Bij patiënten met een donkere huidskleur, kan de huid bleker zijn dan normaal, donkerder zijn dan normaal of paars van kleur zijn.</i> <p>Bijkomende criteria</p> <ul style="list-style-type: none">• Afgetekende zones met een verkleurde huid afkomstig van eerdere (reeds genezen) huidletsels• Glimmende huid• Verweekte huid (maceratie)• Intacte blaasjes of blaren• De huid kan gespannen of gezwollen aanvoelen bij palpatie• Branderigheid, tintelingen, jeuk of pijn	2A - Ontvelling zonder klinische tekenen van infectie	 <p>Essentieel criterium</p> <ul style="list-style-type: none">• Ontvelling<i>Ontvelling kan zich manifesteren als erosie van de huid (kan het gevolg zijn van beschadigde/open blaasjes of blaren), denudatie en frictieletsel. De huidschade heeft een diffuus patroon.</i> <p>Bijkomende criteria</p> <ul style="list-style-type: none">• Aanhoudende roodheid<i>Verschillende tinten roodheid kunnen aanwezig zijn. Bij patiënten met een donkere huidskleur, kan de huid bleker zijn dan normaal, donkerder zijn dan normaal of paars van kleur zijn.</i>• Afgetekende zones met een verkleurde huid afkomstig van eerdere (reeds genezen) huidletsels• Glimmende huid• Verweekte huid (maceratie)• Intacte blaasjes of blaren• De huid kan gespannen of gezwollen aanvoelen bij palpatie• Branderigheid, tintelingen, jeuk of pijn
1B - Aanhoudende roodheid met klinische tekenen van infectie	 <p>Essentiële criteria</p> <ul style="list-style-type: none">• Aanhoudende roodheid<i>Verschillende tinten roodheid kunnen aanwezig zijn. Bij patiënten met een donkere huidskleur, kan de huid bleker zijn dan normaal, donkerder zijn dan normaal of paars van kleur zijn.</i>• Teken van infectie<i>Zoals een witte schijfing van de huid (kan wijzen op een schimmelinfectie) of satelliet letsels (pustels rondom het letsel, kan wijzen op een Candida albicans schimmelinfectie).</i> <p>Bijkomende criteria</p> <ul style="list-style-type: none">• Afgetekende zones met een verkleurde huid afkomstig van eerdere (reeds genezen) huidletsels• Glimmende huid• Verweekte huid (maceratie)• Intacte blaasjes of blaren• De huid kan gespannen of gezwollen aanvoelen bij palpatie• Branderigheid, tintelingen, jeuk of pijn	2B - Ontvelling met klinische tekenen van infectie	 <p>Essentiële criteria</p> <ul style="list-style-type: none">• Ontvelling<i>Ontvelling kan zich manifesteren als erosie van de huid (kan het gevolg zijn van beschadigde/open blaasjes of blaren), denudatie en frictieletsel. De huidschade heeft een diffuus patroon.</i>• Teken van infectie<i>Zoals een witte schijfing van de huid (kan wijzen op een schimmelinfectie) of satelliet letsels (pustels rondom het letsel, kan wijzen op een Candida albicans schimmelinfectie), fibrine aanwezig in het wondbed (geel/bruin/grijs), groene verkleuring in het wondbed (kan wijzen op een bacteriële infectie met Pseudomonas aeruginosa), overmatig exsudaat, etterige afscheiding (pus) of een glanzend aspect van het wondbed.</i> <p>Bijkomende criteria</p> <ul style="list-style-type: none">• Aanhoudende roodheid<i>Verschillende tinten roodheid kunnen aanwezig zijn. Bij patiënten met een donkere huidskleur, kan de huid bleker zijn dan normaal, donkerder zijn dan normaal of paars van kleur zijn.</i>• Afgetekende zones met een verkleurde huid afkomstig van eerdere (reeds genezen) huidletsels• Glimmende huid• Verweekte huid (maceratie)• Intacte blaasjes of blaren• De huid kan gespannen of gezwollen aanvoelen bij palpatie• Branderigheid, tintelingen, jeuk of pijn

IMPLEMENTATION

- Evaluation of 3M™ Cavilon™ Advanced Skin Protectant
 - Mixed cases of 1A and 2A IAD lesions
 - Also evaluated on other MASD clinical manifestations.



Image 1: before application.



Image 2: immediately after application one.



Image 3: after two applications (four days later).

IMPLEMENTATION

- Three year old boy
- Down syndrome
- Hirschsprung operation
- 6 months IAD.



Image 1: before application

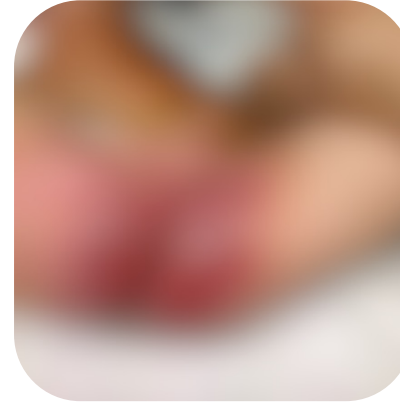
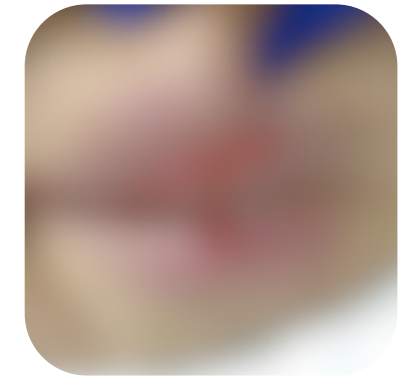


Image 2: after 2 weeks




Image 3: after 4 weeks

- 78 year old lady
- Chronic wound discomfort following radiotherapy for anal tumour
- 5 months IAD.



IMPLEMENTATION

- Positive results
- MASD protocol reviewed
- Similar guidelines for other MASD clinical manifestations
- Hospital wide awareness campaign
- Targeted training
- Adapted registration form
- Procedures.

A LGEMENE REINIGING		
Urine en stoelgang • Water en badolie • Menalind®-schuim bij stoelgang → GOED DEPPEND drogen	Wondomgeving + wonde Fysiologisch serum → GOED DEPPEND drogen	Stoma Water → GOED DEPPEND drogen
Gebruik steeds pH-neutrale producten en GEEN zeep, wegwerpwashandjes, pampendoekjes ...		
B ESCHERMING (= PREVENTIE)		
Bij frequente stoelgang (vast of vloeibaar), urine-incontinentie, sterk-exsuderende wonden, lekkage stoma ...		
Intacte huid • Cavilon®-wipes: steeds als laatste veegbeurt na het wassen of Menalind®-schuim bij stoelgang EN / OF • Cavilon®-crème DUN laagje 2*/dag	Wondomgeving Cavilon®-spray	Stoma Cavilon®-spray
C URATIEF ZONDER INFECTIE		
Intacte huid MET HOOG RISICO OP HUIDONTVELLING Cavilon advanced skin protectant® 2*/week → Zolang externe factor die oorzaak is van vochtletsel aanwezig blijft	Ontvelling Cavilon advanced skin protectant® 2*/week → Zolang externe factor die oorzaak is van vochtletsel aanwezig blijft	Stoma MET HUID-BESCHADIGING en/of hoog risico Cavilon advanced skin protectant® 2*/week of bij vervanging stomamateriaal ! Contacteer stoma team 43775
OPGELET: Bij gebruik van Cavilon Advanced Skin Protectant®, GEEN gebruik maken van: <ul style="list-style-type: none"> • WEGWERPwashandjes • PAMPERdoekjes • Cavilon wipes, Cavilon spray, Cavilon crème • Zinkzalven of andere beschermende crèmes 		
C URATIEF MET INFECTIE		
Schimmelinfectie ZONDER ontvelling 2*/dag • Wassen met Iso-betadine®-zeep zolang er tekenen van infectie aanwezig zijn • Neutraliseren met water • Nystatine-crème in CANI + Mesoft	Schimmelinfectie MET ontvelling 2*/dag • Wassen met Iso-betadine®-zeep zolang er tekenen van infectie aanwezig zijn • Neutraliseren met water • Nystatine-crème in CANI + Mesoft	Stoma ! Contacteer stoma team 43775
* hoeveelheid crème: 2 eurocent Bij problemen, contacteer het wondzorg support team op tel. 41127  Ontwerp en realisatie: dienst communicatie UZ Leuven - november 2018		

ABC OF MASD: IAD

All-round points of interest:

- Good preservation of micturition and micturition training
- Timely change of incontinence materials, wet bandages
- Always use pH-neutral products, do not use soap
- Be careful with 'no-need-to-dry' incontinence wipes.

All-round/general cleaning:

- Wash skin injury and environment gently with water and bath oil
- Use foam cleanser to remove faecal matter
- Gentle cleaning and do not rub when drying.

ALGEMENE REINIGING		
Urine en stoelgang	Wondomgeving + wonde	Stoma
• Water en badolie • Menalind®-schuim bij stoelgang	Fysiologisch serum	Water
→ GOED DEPPEND drogen	→ GOED DEPPEND drogen	→ GOED DEPPEND drogen
Gebruik steeds pH-neutrale producten en GEEN zepen, weegverpakkingsmiddelen, pampendoekjes ...		

ABC OF MASD: IAD

Border protection and prevention of IAD:

- While the skin is intact but at risk or GLOBIAD 1A: intact skin with redness without signs of infection

After cleaning:

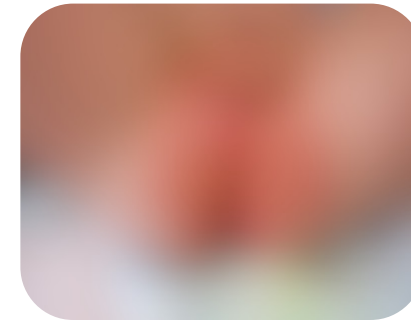
- Use continence care wipes as the last step after cleaning, and/or
- Use a thin layer (size of a pea) durable barrier cream twice a day
- Evaluate the need for a urinary or rectal indwelling catheter.

BESCHERMING (= PREVENTIE)		
Bij frequente stoelgang (vast of vloeibaar), urine-incontinentie, sterk-exsuderende wonden, lekkage stoma ...		
Intacte huid	Wondomgeving	Stoma
<ul style="list-style-type: none">• Cavilon®-wipes: steeds als laatste veegbeurt na het wassen of Menalind®-schuim bij stoelgang EN / OF <ul style="list-style-type: none">• Cavilon®-crème EN laagje 2x/dag	Cavilon®-spray	Cavilon®-spray

ABC OF MASD: IAD

Curative treatment without infection:

- GLOBIAD 1A: intact skin with high risk of lesions
- GLOBIAD 2A: open lesions
- Use Cavilon Advanced Skin Protectant® twice a week, as long as external factor is present.

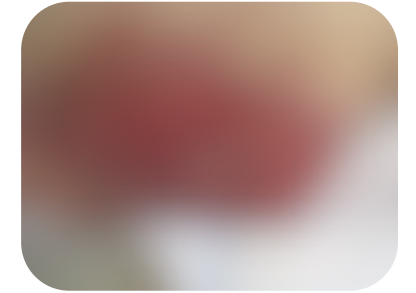
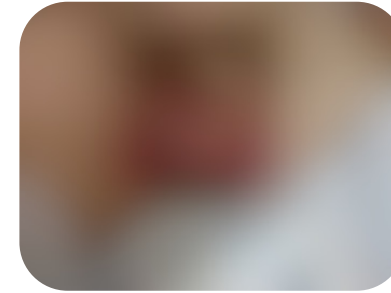


CURATIEF ZONDER INFECTIE		
Intacte huid MET HOOG RISICO OP HUIDONTVELLING Cavilon advanced skin protectant® 2*/week → Zolang externe factor die oorzaak is van vochtletsel aanwezig blijft	Ontvelling Cavilon advanced skin protectant® 2*/week → Zolang externe factor die oorzaak is van vochtletsel aanwezig blijft	Stoma MET HUID-BESCHADIGING en/ of hoog risico Cavilon advanced skin protectant® 2*/week of bij vervanging stomamateriaal ! Contacteer stoma team 43775

ABC OF MASD: IAD

Curative treatment with infection (fungal infection with Candida):

- GLOBIAD 1B: intact skin with signs of infection
- GLOBIAD 2B: lesions with signs of infection
- Wash twice daily if there are signs of infection
- Cleanse skin with water and dry.



CURATIEF MET INFECTIE		
Schimmelinfectie ZONDER ontvelling 2*/dag	Schimmelinfectie MET ontvelling 2*/dag	Stoma
<ul style="list-style-type: none">• Wassen met Iso-betadine®-zeep zolang er tekenen van infectie aanwezig zijn• Neutraliseren met water• Nystatine-crème in CANI + Mesoft	<ul style="list-style-type: none">• Wassen met Iso-betadine®-zeep zolang er tekenen van infectie aanwezig zijn• Neutraliseren met water• Nystatine-crème in CANI + Mesoft	! Contacteer stoma team 43775

OUTCOMES

- Positive evolution
- More attention and knowledge of nurses
- Faster detection of risk patients
- Faster and better prevention
- Cost-benefit
- Positive evolution in healing rate
- More comfort for patients.

INTERTRIGINOUS DERMATITIS

INTERTRIGINOUS DERMATITIS



- Common inflammatory skin disorder that occurs with skin-to-skin friction in skin folds (or intertriginous regions)
- Moisture (normally perspiration) becomes trapped because of poor air circulation
- Increased friction leading to skin damage and inflammation
- Can be complicated by secondary infection (Voegeli, 2020).

INTERTRIGINOUS DERMATITIS



The prevention and management of intertriginous dermatitis involves:

- Educating patients on what it is, what to look for and how to care for skin folds
- Reduce moisture and minimise skin-to-skin friction
- Address predisposing factors
- Wear loose and light clothing made of natural fibres
- Clean and dry skin folds
- Prevent secondary infection (Fletcher et al, 2020; Voegeli, 2020).

MANAGEMENT

- Itch may be a problem – particularly in the presence of fungal infection
- Scratching of uncontrolled itch can cause significant skin damage – transfer of infection to other areas of the body
- Treatments such as drying agents (e.g. talc, corn starch), astringents and absorptive materials have been used for intertriginous dermatitis – may not be suitable for use and may cause further irritation (Fletcher et al, 2020).

SKIN FOLD MANAGEMENT



Uncomplicated intertriginous dermatitis:

- Cleanse with a no-rinse, pH balanced cleanser
- Avoid use of alkaline soaps – emollient based soap substitutes can be an alternative
- Thoroughly dry the skin without causing excessive friction
- Skin barrier creams and films may protect the skin from moisture and reduce friction – further research required.

Complicated by secondary infection:

- Based on local policy – antimicrobial/antifungal and corticosteroid creams (Fletcher et al, 2020; Voegeli, 2020).

PERIWOUND MOISTURE- ASSOCIATED DERMATITIS

PERIWOUND MOISTURE-ASSOCIATED DERMATITIS



- An important but sometimes overlooked area, despite impact on wound bed preparation and wound healing
- The periwound is the area around a wound that may be affected by wound-related factors and/or underlying pathology (LeBlanc et al, 2021).

PERIWOUND MOISTURE-ASSOCIATED DERMATITIS

The prevention and management of periwound moisture-associated dermatitis involves:

- Identifying and managing the cause:
 - Holistic wound and skin assessment
 - In high volumes of exudate – wound bed preparation, oedema control
- Wound and periwound cleansing:
 - removing surface contaminants, bacteria and previous dressings/treatments
 - Improving visualisation.

(Fletcher et al, 2020; LeBlanc et al, 2021)

PERIWOUND MOISTURE-ASSOCIATED DERMATITIS

- Wound dressing selection and usage in order to optimise healing and minimise further damage:
 - Such as absorbency in periwound maceration
 - Applying protective barrier films
- Dressing application and removal:
 - Protecting the periwound skin from adhesive damage (medical adhesive-related skin injury (MARSI))
 - Applying protective barrier films
 - Avoiding products that interfere with absorbency or adhesion
 - Assess the periwound area at each dressing change.
(Fletcher et al, 2020; LeBlanc et al, 2021)

PERIWOUND SKIN CARE

- Increase awareness and education
- Involve patients and carers in education and importance of periwound skin care
- Periwound damage is a risk factor for delayed wound healing and may increase the risk of wound infection.



PERISTOMAL MOISTURE- ASSOCIATED DERMATITIS

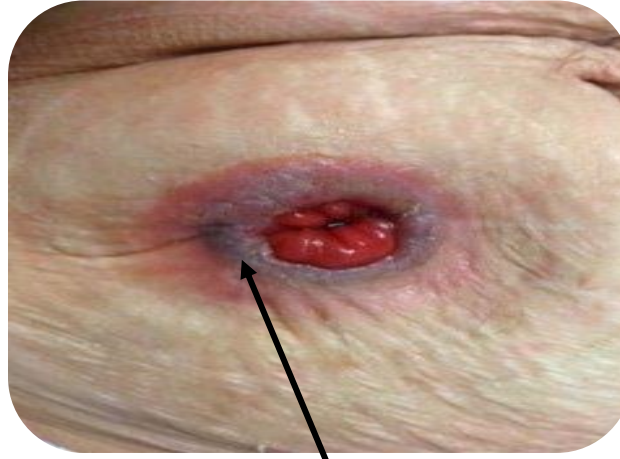
PERISTOMAL MOISTURE-ASSOCIATED DERMATITIS



- Peristomal skin: skin around a stoma
- Nearly 75% of people with a stoma experience peristomal skin problems (Salvadarena, 2013)
- Peristomal skin problems impair physical function, reduce quality of life and are associated with higher costs (Jemec et al, 2011).

PERISTOMAL MASD: CHALLENGES

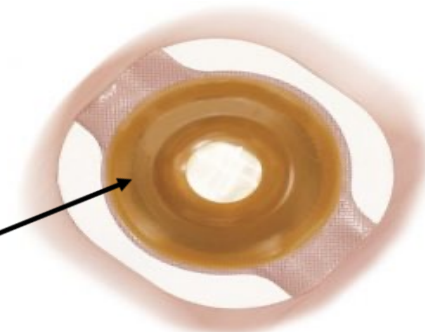
- Pouching systems rely upon an adhesive seal on dry intact skin
- Moist injured peristomal skin negatively affects the pouch seal
- Moist skin, poor seal and leakage of the stoma effluent results in injured skin.



Next to the stoma



2.5 cm out from the stoma



Adhesive (skin barrier)

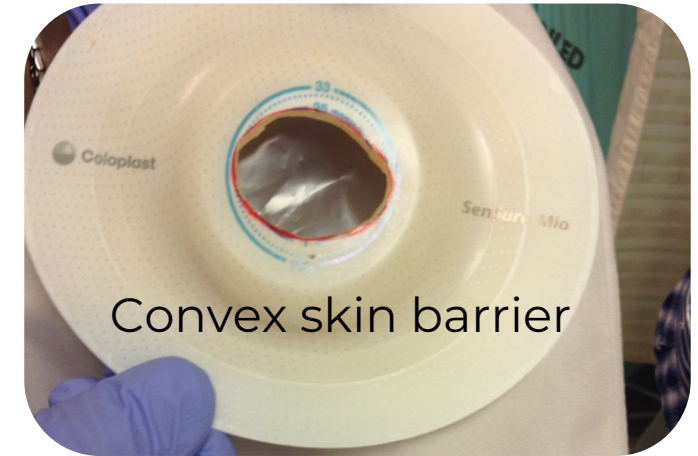
PERISTOMAL MASD: MANAGEMENT

Determine etiology:

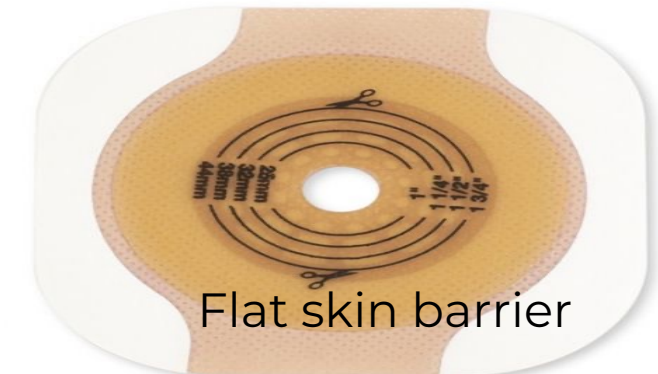
- Correct pouching system fit
- Wear time
- Etiology.

Intervention(s):

- Match skin barrier opening to stoma
- Match skin barrier shape to stoma and peristomal area
- Adjust wear time.



Convex skin barrier

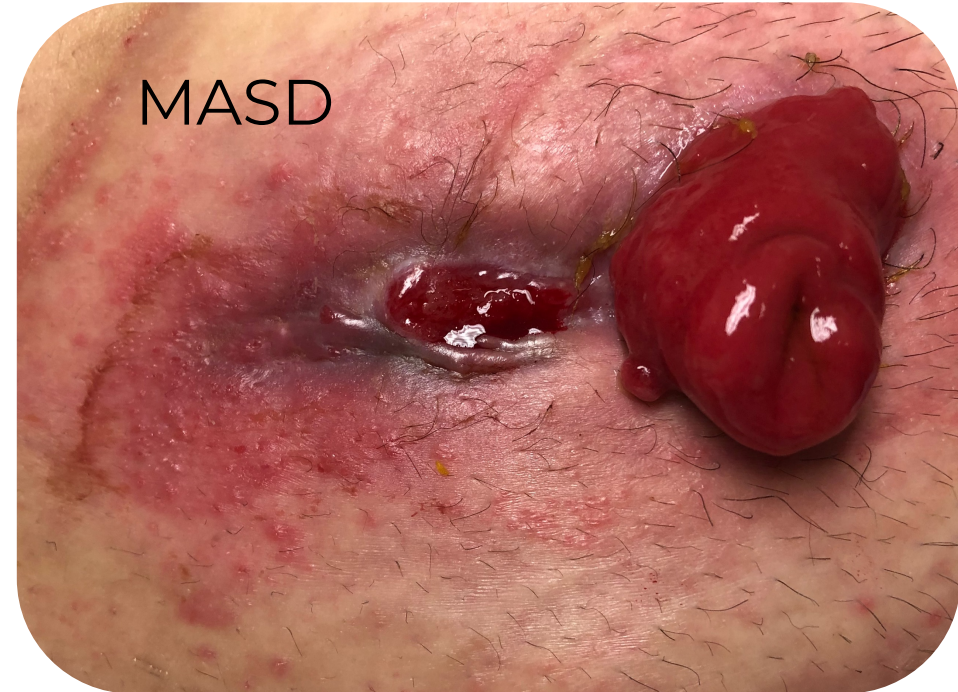


Flat skin barrier

PERISTOMAL MASD: MANAGEMENT

Peristomal Wound:

- Etiology: Pyoderma gangrenosum (healing)
- Hypergranulation tissue (triamcinolone paste)
- Foam dressing to wound
- Moisture from wound has injured skin.



PERISTOMAL MASD: MANAGEMENT

- Skin barrier powder absorbs moisture.



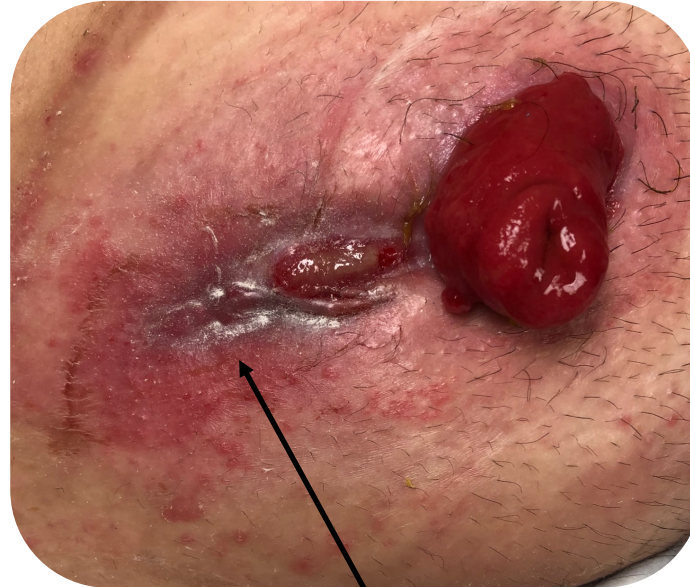
Liberally applied powder



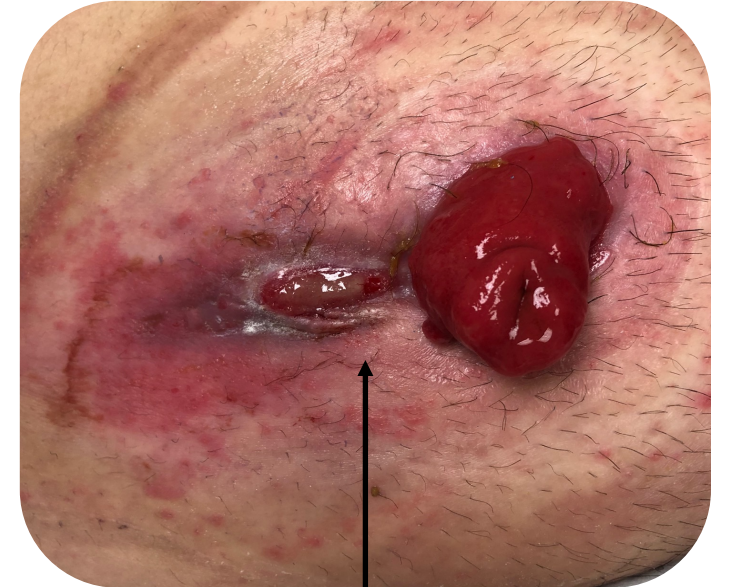
Powder rubbed into injured skin

PERISTOMAL MASD: MANAGEMENT

- Seal powder and skin
- Cyanoacrylate provides a protective dry barrier to allow pouch seal.



Powder



Cyanoacrylate:
liquid skin barrier

CASE STUDY: PMASD

Moist red irritated itchy peristomal skin

Assessment:

- Weepy peristomal skin
- Beyond pouching system.

Etiology:

- No seal issues
- Recent antibiotics
- Fungal.

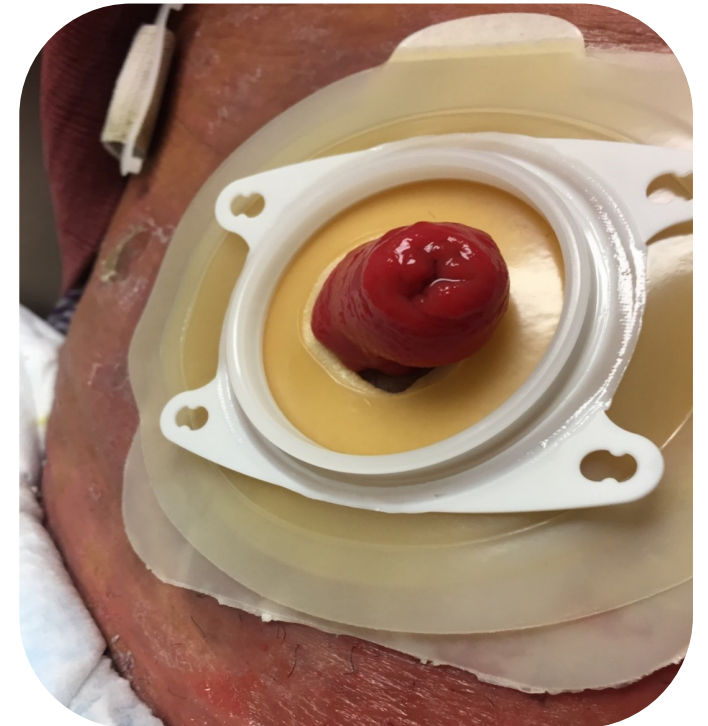


CASE STUDY: PMASD

Moist red irritated itchy peristomal skin

Treatment(s):

- Antifungal powder
- Oral antifungals
- Cyanoacrylate skin barrier
- Protective barrier sheet (hydrocolloid).



CASE STUDY: PMASD



CASE STUDY: PMASD



Before treatment



After treatment

PERISTOMAL MOISTURE-ASSOCIATED DERMATITIS

Takeaways:

- Determine the etiology of the skin injury (assessment)
- Correct or reduce etiology (pouching system for many)
- Skin treatment – provide a dry surface:
 - Skin barrier powder
 - Cyanoacrylate liquid skin barrier
 - Hydrocolloid dressing
- Patient education and support.

CONCLUSIONS

- Comprehensive holistic assessment – individualised, patient-centred care
- Educating patients and promoting self care
- Addressing comorbidities
- Important basics – e.g. nutrition and hydration, moisturise and protect the skin
- Promoting skin health and preventing skin injury should be a priority in all aspects of care (Beeckman et al, 2020).

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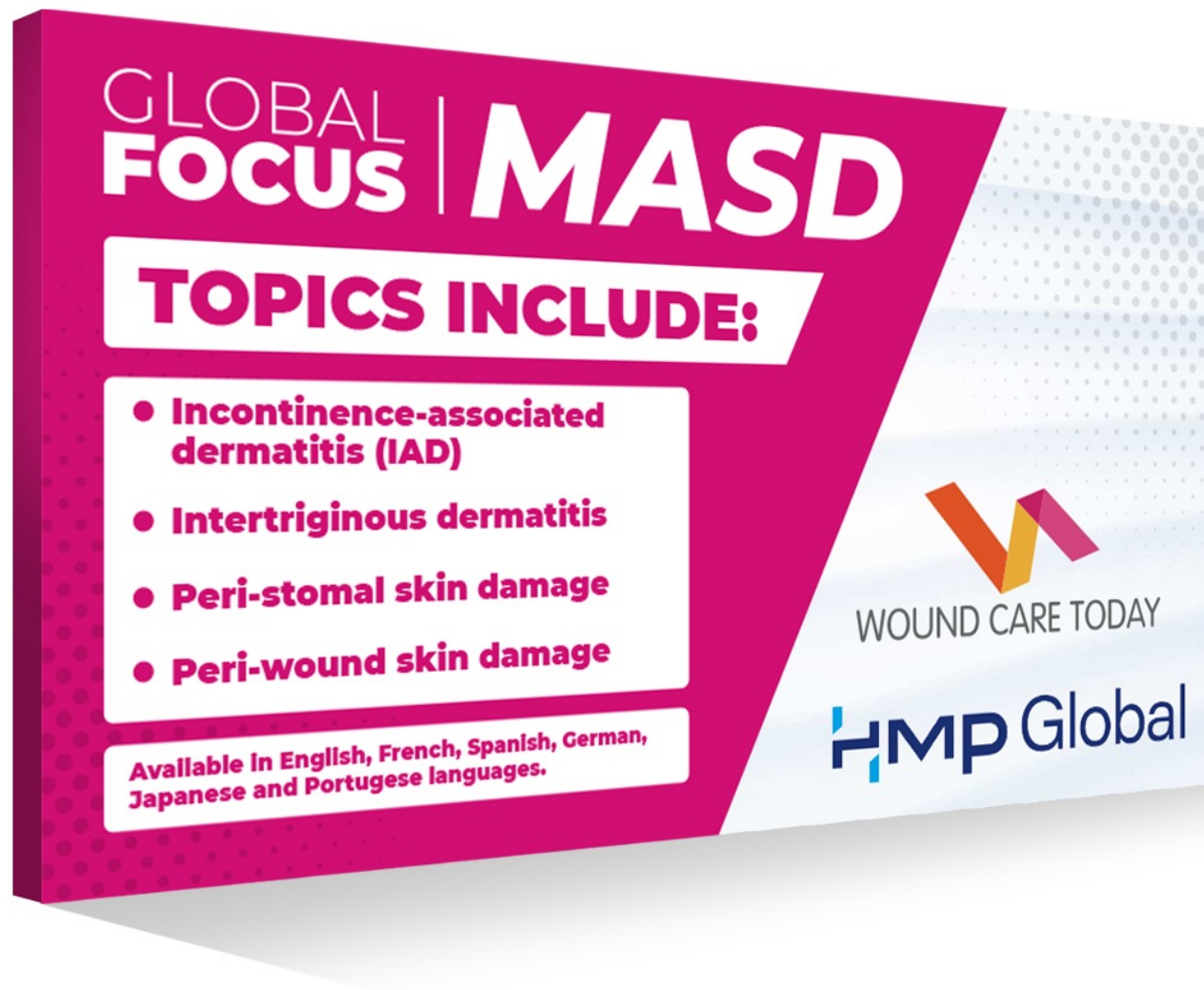
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