CLINICAL MANAGEMENT extra

Understanding Moisture-Associated Skin Damage, Medical Adhesive-Related Skin Injuries, and Skin Tears

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Karen Zulkowski, DNS, RN • Executive Editor • WCET Journal • Instructor • Excelsior College, Albany, New York

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GENERAL PURPOSE:

To provide information on superficial skin issues related to moisture-associated skin damage, medical adhesive-related skin injury, and skin tears.

TARGET AUDIENCE:

This continuing education activity is intended for physicians, physician assistants, nurse practitioners, and nurses with an interest in skin and wound care.

LEARNING OBJECTIVES/OUTCOMES:

After participating in this educational activity, the participant should be better able to:

1. Examine the anatomy of skin, including changes that occur from aging and chronic wounds.

2. Identify issues related to moisture-associated skin damage, medical adhesive-related skin injury, and skin tears, including techniques for prevention.

ABSTRACT

The purpose of this continuing education article is to examine the superficial skin issues related to moisture-associated damage, medical adhesive-related skin injury, and skin tears. Similarities, differences, prevention, and treatment will be described.

KEYWORDS: moisture-associated skin damage, medical adhesive-related skin injury, skin tears

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INTRODUCTION

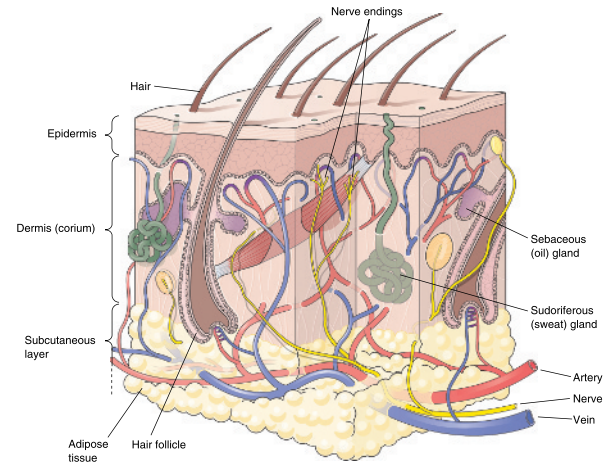
The epidermis is the body's physical barrier to the environment.[1] When moisture or trauma damages this outer layer of skin, its protective mechanism is compromised, and infection, pain, and subsequent delayed healing can occur.[2] Several issues may have common characteristics, but they require different approaches to prevention and treatment. For example, epidermal skin problems may be caused by moisture or adhesive damage to the skin. Both are painful, and both damage the outer layer (epidermis) of the skin.[3,4] In addition, both can occur alone or exacerbate the other, and both can lead to skin stripping or skin tears. Other superficial issues that can occur together include incontinence-associated dermatitis (IAD), intertriginous dermatitis (ITD), and periwound or peristomal dermatitis.[4–11] Regardless of the cause, the damaged area is more susceptible to infection and delayed healing. This continuing education article examines the superficial skin issues related to moisture-associated skin damage (MASD), medical adhesive-related skin injury (MARSI), and skin tears; similarities, differences, prevention, and treatment are described.

ANATOMY OF THE SKIN

Skin is the largest organ of the body, covering more than 20 sq ft in an average adult and weighing 6 to 8 lbs. One square inch (6.5 sq cm) of skin may contain up to 15 ft (4.5 m) of blood vessels.[1] Intact skin is the body's first line of defense against the invasion of organisms and is an important part of the immune system.[3,4] The acid mantle of the skin (pH <5) allows its host organisms (bacteria, virus, and fungi) to stay constant but prevents virulent bacteria from colonizing.[12] Skin also houses the mechanisms for the transmission of touch, pain, temperature, and pressure. It also helps with regulating homeostasis of the body, as it receives approximately one-third of the circulating blood volume and prevents excessive loss or absorption of fluid. When skin is exposed to excessive amounts of moisture, it will soften, swell, and look wrinkled, making it more susceptible to friction damage.[13]

Skin has 3 distinctive layers: the epidermis, dermis, and subcutaneous layer (Figure 1). The epidermis is the outermost layer of the skin and acts as a physical barrier to the outside

Figure 1.
CROSS-SECTION OF THE SKIN



Layers of the skin are illustrated. Modified from Cohen BJ, Taylor J. Memmler's Structure and Function of the Human Body. 8th ed. Baltimore, MD: Lippicott Williams & Wilkins; 2005.

world. It is thin and avascular, and its hue is dependent on the person's cultural background and individual genetics. The epidermis is covered by keratinized epithelium and supported by dermis and underlying connective tissue. Its composition is slightly acidic, and it regenerates every 4 to 6 weeks.[1]

The epidermis is composed of 5 layers: stratum corneum, stratum lucidum, stratum granulosum, stratum spinosum, and stratum germinativum. These layers vary in thickness in different areas of the body. The stratum corneum is composed of protein-rich corneocytes that are held together by a lipid-rich mortar. In addition to being a rigid protein structure, the corneocytes have substances that attract and hold water in the stratum corneum.[3]

Skin changes with aging, and the epidermis becomes thinner; as rete pegs loosen, the epidermis is no longer anchored to the dermis. This means the skin has poor turgor, and skin tears easily.[1] Blood vessels are more fragile, and older adults may bruise easily. Skin becomes less elastic, and wrinkles appear. This is especially noticeable in areas of sun exposure.[4] Therefore, aging skin is more susceptible to injury.

Moisture-associated skin damage, MARSI, and skin tears can damage the outer layer of the skin. Although different mechanisms of destruction, each of these has strong associations with friction/shear and can result in inflammation and infection once the outer layer of the skin is disrupted.

MOISTURE-ASSOCIATED SKIN DAMAGE

Moisture can come from multiple sources, including wound exudate, other secretions, incontinence, and perspiration, as well as frequent washing with soap and water. Prolonged exposure to

moisture damages the outermost layer of epidermis and makes it more susceptible to friction or shear damage and subsequently pathogens.[14] The most common pathogens are *Candida albicans* and *Staphylococcus*. Moisture-associated skin damage is defined as inflammation and erosion of the skin caused by prolonged exposure to various sources of moisture, including IAD from urine and/or stool; ITD from perspiration; periwound MASD from wound exudate; mucus or saliva; and peristomal MASD from moisture around the stoma.[15] Moisture-associated skin damage is more difficult to see in persons with darkly pigmented skin, but hyperpigmentation or hypopigmentation may be present.[16] Necrosis is not present in MASD.

Incontinence-Associated Dermatitis

Moisture from urine and/or stool leads to what is commonly called IAD[15,17] (Figure 2). This is predominately a chemical irritation caused by urine and/or stool coming in direct contact with the skin.[11,18] The alkaline nature of urine increases the skin's pH, changing it from acidic (pH <7) to alkaline (pH >7).[15] In addition, the alkaline urine may promote the enzymatic activity of proteinases and lipases when fecal incontinence is present and further erode the skin's surface. Maceration of the skin occurs, making the area susceptible to friction or shear damage.[19] This is especially problematic in older adults with fragile skin that is subjected to sliding for transfer from bed to chair and similar activities.

Liquid stool contains more digestive enzymes and is more damaging than formed stool.[11] Enzymes also act on the urea in urine to produce ammonia, which further increases the skin's pH away from its normal acidic state.[19]

Incontinence-associated dermatitis appears as a diffuse area of erythema. It can extend into the perineum, skin folds, between the buttocks, and down the inner thighs.[20] Scaling of the skin with papule and vesicle formation may also occur. These formations may open with "weeping" of the skin, which exacerbates skin damage. In these cases, skin damage is typically shallow or superficial, and edges are irregular or diffuse. Maceration or a whitening of skin may be observed. The patient may report burning, itching, and pain.[20]

Figure 2.
INCONTINENCE-ASSOCIATED DERMATITIS ON SACRUM OF OLDER ADULT AFTER PROTECTIVE CREAM WAS APPLIED

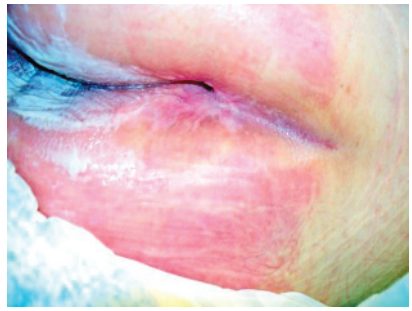
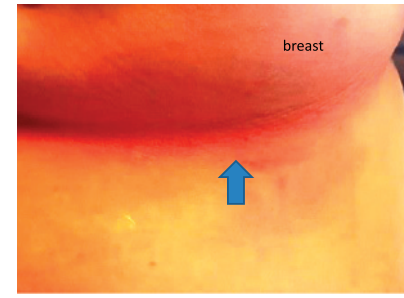


Figure 3.
EARLY INTERTRIGINOUS DERMATITIS WITHOUT INFECTION AS SEEN IN REDNESS UNDER INDIVIDUAL'S BREAST



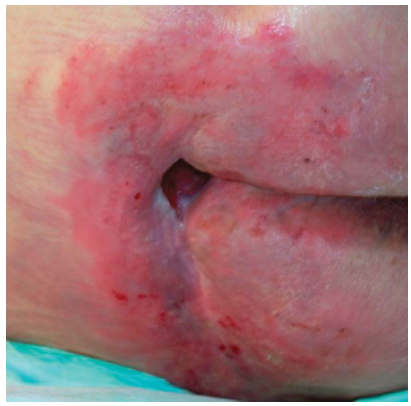
Intertriginous Dermatitis or Intertrigo

Intertriginous dermatitis results from moisture trapped between skin folds. Air does not circulate well in these areas, and so the moisture, usually as perspiration, remains trapped. As a result, the skin becomes macerated, and friction damage from skin surfaces rubbing together can occur.[21] This damage is mirrored on both sides of the skin fold. When the outer layer of the skin (stratum corneum) becomes macerated, the effects of friction are increased. Consequently, this further erodes the epithelium and can progress to inflammation and breakdown. Thus, the area becomes a potential entry point for microorganisms and may lead to a secondary infection[22] (Figure 3). Fungal infections, typically from candidiasis, are common in these areas.[23] Persons living in moist, humid, warm climates may also be at risk of fungal infections between their legs or buttocks, as well as under the breasts and arms or between toes. For obese individuals, skin folds are often difficult to cleanse well, and perspiration keeps the area moist. Infants may develop ITD in their neck folds from the pooling of drool or vomitus.[21]

Periwound-Associated Dermatitis

Wound exudate is a normal occurrence in the inflammatory stage of healing. However, damage can also occur when this exudate saturates the skin surrounding the wound. Chronic wounds, usually stalled in the inflammatory stage, have higher levels of

Figure 4.
MOISTURE-ASSOCIATED SKIN DAMAGE SECONDARY TO WOUND EXUDATE AND URINARY INCONTINECE



proinflammatory cytokines and proteases and lower levels of growth factors. This results in an elevated pH (pH >7) and this alkaline environment makes the skin more susceptible to pathogens, causing extensive areas of redness surrounding the wound and more tissue destruction. Aggressive or frequent dressing removal, including any adhesive products, can also damage this fragile skin (Figures 4 and 5).

When periwound skin is initially exposed to moisture, the stratum corneum absorbs the moisture and swells. This eventually saturates the lower levels of the epidermis, which reduces the protective barrier to moisture and increases the risk of maceration. In addition, this reduces the skin barrier function and can make patients more susceptible to developing contact dermatitis and MARSI.[24]

Figure 5.
WHITE TISSUE AROUND WOUND EDGE IS THE RESULT OF MACERATION FROM WOUND EXUDATE

The macerated areas will appear white where there is little or no inflammation and erythematous where it is present (Figure 5). Maceration can also prevent cell migration across the wound surface and result in prolonged healing and pain for the patient.[17]

Peristomal Moisture-Associated Dermatitis

Peristomal damage can result from a poor seal around the stoma, allowing stool or urine to collect under the seal. Inflammation and erosion (an incomplete loss of the epidermis caused by moisture that is circumscribed, and usually depressed) of the moisture-damaged skin can extend outward in a 10-cm radius. This can occur because the fit of the pouch is not correct or the person has a stoma in a difficult area to allow for adherence. Peristomal MASD can also occur from perspiration or drainage from surrounding wounds.[25] Drainage may be from exudate or fecal material from spontaneous fistulas. Stomas with more liquid output, such as ileostomies, have a higher rate of peristomal skin issues, and so do new ostomies on persons who may not be proficient in placing their pouch[26] (Figure 6).

Because the ostomy drainage is urine or stool, the mechanisms of skin irritation are the same as that of IAD, but treatment is difficult because of pouching issues. Frequent removal of the skin barrier needed for pouch placement can further complicate skin issues. Aggressively removing the barrier can lead to MARSI as well.

MEDICAL ADHESIVE–RELATED SKIN INJURY

Medical adhesive–related skin injury is tissue trauma related to the use of medical adhesive products or devices. Adhesive is found in tapes, dressings, stoma barriers, electrocardiogram electrodes, and medication patches. This also includes any product that is used to approximate wound edges or affix a device to the skin. If proper placement and removal of adhesive-containing items

Figure 6.
PERISTOMAL SKIN DAMAGE

The tube was used to temporarily stop the continuous flow of liquid stool, so the area could be cleaned and a barrier and bag applied

do not occur, superficial layers of the skin are removed with the adhesive product.[10] Even if there is no visible irritation, some skin cell detachment occurs, and repeated application and removal compromise skin barrier function and initiate inflammation and the wound healing response.[10] Medical adhesive–related skin injury is suspected if erythema or other forms of skin injury persist for 30 minutes or more after adhesive removal[27] (Figure 7).

The skin injury occurs when skin-to-adhesive attachment is stronger than skin-to-skin attachment. This results in the epidermal layers separating or the entire epidermis separating from the dermis. Repeated application and removal of adhesive products may lead to skin injury. Trauma may be mechanical and can range from skin stripping to a tension injury (see Table for definition) or blister or to a skin tear. Irritant or allergic dermatitis may develop under the product, and maceration from trapped moisture or folliculitis can also occur.[27]

SKIN TEARS

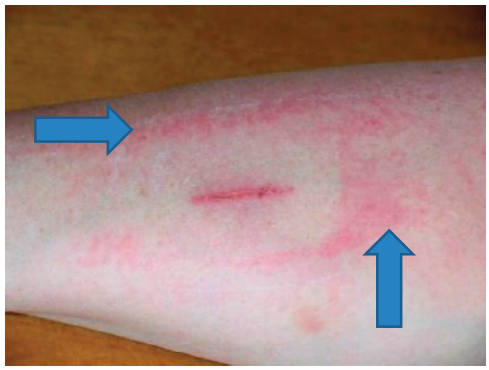
Skin tears are caused by shear, friction, or trauma. This results in separation of the skin layers. It usually presents as the epidermis pulled away, resulting in a partial-thickness wound, but in some cases may be full thickness.[28] Skin tears are classified by the International Skin Tear Advisory Panel (ISTAP) classification system available at www.skintears.org as having no skin loss (type 1), partial flap loss (type 2), or total flap loss (type 3).[28] Skin tears may occur during the removal of adhesive-based products, and any maceration makes the skin more susceptible to friction-related tearing of the epidermis[10] (Figures 8 and 9).

Skin tears occur most frequently in older adults because of the decreased elasticity and tensile strength of their skin. However, neonates and infants are also susceptible. Neonates may have underdeveloped skin with decreased epidermal-to-dermal cohesion, and children's skin has only 60% of adult epidermal thickness.[6] Skin tear risk is also increased in persons with dehydration, poor nutrition, cognitive impairment, decreased mobility, and/or decreased sensation. Medications such as corticosteroids interfere with collagen synthesis and epidermal regeneration and may make the skin more susceptible to skin tears.[28]

SIMILARITIES AND OVERLAP IN SKIN ISSUES

Patient care is never a single issue that needs to be addressed. Rather, it is a complex interwoven matrix of issues. Sometimes several issues have common characteristics, but require totally

Figure 7.
DAMAGE AROUND WOUND FROM FREQUENT DRESSING REMOVAL AND POSSIBLE ALLERGY TO ADHESIVE



Arrows show damage outside of the wound and dressing area.

Figure 8.
SKIN TEAR WITH FILM DRESSING SHOWS SOME SCABBING STARTING AND SUPERFICIAL REDNESS

Figure 9.
FULL-THICKNESS SKIN TEAR

Dark area is the skin flap, shown with arrow.

different approaches to prevention and treatment. Moisture and MARSI often occur together, and both make the skin susceptible to tearing. Moist skin is more easily damaged during adhesive-based product removal and because of the effects of friction.[9,10,19,20] Therefore, it is important to look carefully to understand the multiple factors that can cause the resulting skin irritation. For example, ostomy effluent under a pouch system or wound exudate under an adhesive dressing site may be responsible for skin irritation. The patient may be allergic to the product, or the adhesive may have been pulled too tight. Multiple factors can affect the epidermis, and all should be considered alone and in combination when a skin issue occurs.

PREVENTION AND TREATMENT

It is always easier to prevent a skin problem from developing than it is to try to heal it after it occurs. Any break in the skin is painful and has the potential to develop complications, including delayed healing, infection, and further damage.[29] Prevention starts with careful assessment, individualized care planning, and staff education. It requires adoption of a structured skin care regimen, cleansing of the skin with appropriate cleansers rather than soap and water, and protecting the skin from further damage.[5,15,21,30,31]

Most moisture issues can be prevented by using products to protect the skin and vigilance before a problem develops.[20] In recent years, multiple barrier/skin protectant products have been made available as spray or wipes to help protect skin surrounding a wound or stoma from moisture.[18] It is important not to place these products in direct contact with the wound and to use products that do not sting or burn, especially when applying to damaged or compromised skin. More absorbent dressings and the use of vacuum-assisted closure may also help with exudate management.[32] Any of these products or devices, however, will require something to secure them, so skin irritation, allergic dermatitis, or skin damage from adhesives may potentially develop. This applies to everything from an adhesive leg strap to ostomy seals to any wound dressing.

Incontinence-Associated Dermatitis

Incontinence-associated dermatitis can develop in anyone with urinary or fecal incontinence. Incontinence has been reported in as many as half of all nursing home residents and 10% to 35% of community-dwelling adults.[11] It is important to know the type of incontinence present, such as stress, urge overflow, or mixed (multiple causes), and if the person is properly hydrated or could have a bladder infection.

It is important to wick moisture away through the use of appropriate pads or briefs and to apply barrier creams after each incontinent episode.[21] Toileting plans consistent with the person's usual voiding pattern may be implemented, as well as undergarments for light incontinence. For a person known to be incontinent, a diary of incontinence times can be kept for the first 48 hours in the facility to aid care planning. Staff should cleanse a person incontinent of urine and/or stool as soon as possible.[33] Treatment or management interventions should be initiated appropriately. Toileting plans may include setting toileting times and incorporating toileting assistance, pads, or briefs.[21]

In persistent cases, catheters or fecal containment devices may be needed. It is important to use these for as short a time as possible to prevent infection or irritation of the bladder or rectum.[34] However, when the skin is excessively inflamed, the temporary use of these devices, along with products to protect and treat the affected area, may be needed. Protectant creams, ointments, sprays, and similar products should be applied each time the person is toileted or cleaned, especially after fecal incontinence episodes.[20] Staff should remove any unused products from the patient room, so the correct products are used on a regular basis.

Intertriginous Dermatitis

Skin folds have to be examined carefully and kept clean and dry. If possible, improved air circulation is helpful. Talcum powder, gauze, or towels should *not* be used between skin folds because they may trap moisture and can increase friction to the skin.[18] The patient should be educated on the need for good hygiene in the skin folds.

The treatment goal for ITD is to control moisture, minimize friction in the skin folds, and treat any infection.[22] All staff should be educated on how to clean and dry between skin folds and to check the area for signs of additional or worsening erythema. Cleansers should be pH-balanced so the skin remains in the acidic pH range and is not further irritated. Products are available to place between skin folds that will absorb moisture and reduce friction.[21] These can include soft, absorbent pads or nonocclusive, high-air-flow incontinence pads. Moisture-wicking fabric products are also effective.

Periwound-Associated Dermatitis

The skin surrounding the wound should be assessed at each dressing change. Visual assessment should focus on skin color, integrity, and the extent and distribution of skin damage, maceration, or irritation. When applying a dressing, be sure to base selection not only on wound characteristics, such as tissue and moisture, but also on location of the wound. Some areas are flat and immobile, and other areas need to move with the person. Putting a wound dressing that does not flex or move in these

areas can lead to excessive shear pressure and subsequent skin damage.[27]

It is important to change the dressing when it is saturated. Allowing moisture to leak from a dressing or under the adhesive increases the risk of damage to the surrounding tissue. Because a dressing can be left on for 3 days does not mean it should be left on that long. Moisture in the periwound area also makes the skin more susceptible to MARSI.

Peristomal Moisture-Associated Dermatitis

Peristomal skin complications are a common issue for ostomy patients.[35] Issues can include poorly fitting appliances, leakage, and skin irritation. Skin irritation can be from moisture under the barrier, contact dermatitis from an allergy to the product, and/or skin irritation from MARSI.[36] Be sure to ask patients what products they are using, including skin barrier paste, liquids, or powders, as well as daily and leisure activities, changes in routine or medical status, output characteristic (urine or stool), and frequency of pouch changes.[30]

Stoma products need to be fitted to the individual. The abdominal contour should be examined in a sitting, lying, and standing position for correct product selection. The climate, financial situation, and lifestyle should be considered in product selection. A person's body size, build, stoma location, work requirements, and characteristics should also be examined.[26] An individual's culture and customs should also be considered.[37]

Remember that patients having an emergency ostomy are more likely to have complications and should be monitored closely.[38]

Medical Adhesive–Related Skin Injury

Selection of any product with an adhesive can be limited by availability, for example, electrocardiogram electrode pads. Pressure-sensitive adhesives should be used whenever possible.[27] When applying a product, the skin should be clean and dry. The adhesive product should be smoothed into place without too much force and without wrinkles or gaps. In areas that need to move, flexible products should be used. Do not pull the product so firmly that the skin is stretched.[27] Always remove the product slowly toward the center of the wound. The removal of adhesive dressings always involves the risk of stripping away the regenerating epithelium in the wound itself, as well as damaging the intact skin surrounding the wound.[9]

Skin under any adhesive product should be carefully inspected each time the item is changed. Irritation can also be from an allergic reaction. Placing the adhesive product in a slightly different location each time can help with irritation, but moisture can become trapped under products and result in skin maceration.[27]

Skin Tears

Skin tears should be closely monitored and accurately described. Older persons or anyone with fragile skin should be taught prevention measures. Both the Payne-Martin[39] or Skin Tear Audit Research (known as STAR) classification systems have been used for categorization.[6] However, these classifications have been underused in clinical practice.[40] In 2012, the ISTAP skin tear classification and toolkit were developed and validated by experts to simplify, standardize, and clarify skin tear reporting and aid in prevention.[28,29] The ISTAP classifications are listed in the Table. It is important to know which classification tool is being used in your facility so documentation is consistent.

If a skin tear is present, it should be carefully cleansed following assessment to remove debris.[28] Skin tears are acute wounds and should be closed with primary intention. The skin flap (pedicle) should be approximated when possible, and a nonadherent dressing applied.[29] Any dressing must be removed with caution to avoid additional skin injury or MARSI during the dressing change.[7] The dressing should be specifically indicated for use on a skin tear.[41] Examples can include any moisture-retentive dressing usually made from mesh, silicone, foam, acrylic, hydrogel, calcium alginate, and/or hydrofiber.[29]

Persons at risk of a skin tear should be encouraged to wear long sleeves and may even need protective padding on their extremities.[29] They should avoid strong soaps, apply a moisturizer to their arms and legs twice daily, maintain adequate hydration and nutrition, and have adequate lighting in hallways and rooms so they do not bump into furniture, especially during the night.[28]

CONCLUSIONS

Any sign of skin irritation should be documented with subsequent care planning and appropriate treatment. Clinicians should determine the cause or causes of the irritation to find the proper solutions. Unfortunately, many skin-related problems have multiple issues and are overlapping. Moisture under dressings or stoma products, adhesive product use in the same skin area or improper placement and removal, moisture between skin folds, incontinence, and patient factors all influence whether a problem will develop.

Many epidermal skin issues can and should be prevented. Any skin issue should be tracked and seen as an opportunity for improvement in care. All staff should understand their roles in prevention and what to report. Patient education and family

Table.
TYPES OF EPIDERMAL SKIN DAMAGE

Moisture-associated skin damage	Inflammation and erosion of the skin caused by prolonged exposure to various sources of moisture and its contents, including urine, stool, perspiration, wound exudate, mucus, or saliva. It includes incontinence-associated dermatitis, intertriginous dermatitis, and periwound- and peristomal-associated dermatitis.[30]	
Incontinence-associated dermatitis	Skin damage associated with urine and/or fecal incontinence being in direct contact with the skin. It is an irritant dermatitis.[31]	
Intertriginous dermatitis	Skin irritation from moisture trapped between skin folds commonly found in the inframammary, axillary, and inguinal skin folds. It is an inflammatory dermatitis.[21]	
Periwound-associated dermatitis	Maceration of periwound skin caused by excess wound exudate. In some cases, it may extend beyond 4 cm from the wound edge.[30]	
Peristomal moisture–associated dermatitis	Inflammation and erosion of skin related to moisture that begins at the stoma/skin junction and can extend outward in a 4-in radius.[30]	
Medical adhesive–related skin injury	Tissue trauma related to the use of medical adhesive products or devices. Erythema and/or other manifestations of cutaneous abnormality (including but not limited to vesicle, bulla, erosion, or tear) that persists 30 min after removal of the adhesive.[10]	
Mechanical	Epidermal stripping	Removal of 1 layer of the stratum corneum occurring following removal of adhesive tape or dressing. Lesions are usually shallow and irregular in shape. The skin may appear shiny, and open lesions may be accompanied by erythema and blister formation.[10]
	Tension injury or blister	Separation of the epidermis from the dermis caused by shear force as a result of distension of the skin under an unyielding adhesive tape or dressing, inappropriate strapping of tape or dressing during application, or when a joint or other area of movement is covered by unyielding tape.[10]
	Skin tear (ISTAP)	A wound caused by shear, friction, and/or blunt force resulting in separation of skin layers. Can be partial or full thickness.[7,8,29]
	Type 1 skin tear—no skin loss	Linear or flap tear that can be repositioned to cover the wound bed[7,8,29]
	Type 2 skin tear— partial flap loss	Partial flap loss that cannot be positioned to cover the wound bed[7,8,29]
	Type 3 skin tear— total flap loss	Total flap loss that exposes the entire wound bed[7,8,29]
Dermatitis	Irritant contact	Nonallergic contact dermatitis occurs as a result of a chemical irritant. A well-defined area corresponds with the area exposed. It may appear reddened or swollen, and vesicles may be present.[19]
	Allergic	Cell-mediated immunologic response to a component of tape adhesive or backing. Typically appears as an area of erythematous, vesicular, puritic dermatitis in the area of exposure.[19]

(continues)

Table.
TYPES OF EPIDERMAL SKIN DAMAGE, CONTINUED

Other	Maceration	Changes in skin as a result of moisture being trapped against the skin for a prolonged period. Skin appears wrinkled and white/gray.[9]
	Folliculitis	Inflammatory reaction in hair follicle caused by shaving or entrapment of bacteria. Appears as small inflamed elevations of skin surrounding the hair follicle.[19]

Abbreviation: ISTAP, International Skin Tear Advisory Panel.

education are equally important to avoid additional skin problems after facility discharge.

PRACTICE PEARLS

- Prolonged exposure to moisture damages the outermost layer of epidermis and makes it more susceptible to friction or shear damage and subsequently infection.
- Moisture-associated skin damage (MASD) is defined as inflammation and erosion of the skin caused by prolonged exposure to various sources of moisture, including incontinence-associated dermatitis from urine and/or stool, intertriginous dermatitis from perspiration, periwound MASD from wound exudate, mucus or saliva, and peristomal MASD from moisture around the stoma.
- Medical adhesive-related skin injury is tissue trauma related to the use of medical adhesive products or devices. It can occur in any body area where adhesive products are used.
- Prevention starts with careful assessment, individualized care planning, and staff education. It requires adoption of a structured skin care regime, cleansing of the skin with appropriate cleansers rather than soap and water, and protecting the skin from further damage.
- Many skin-related problems have multiple issues and are overlapping. For example, moisture under dressings or stoma products, adhesive product use in the same skin area or improper placement and removal, moisture between skin folds, incontinence, and patient factors all influence whether a problem will develop.

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