

Skin tear

Clinical Education



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TEXT SUMMARY VERSION

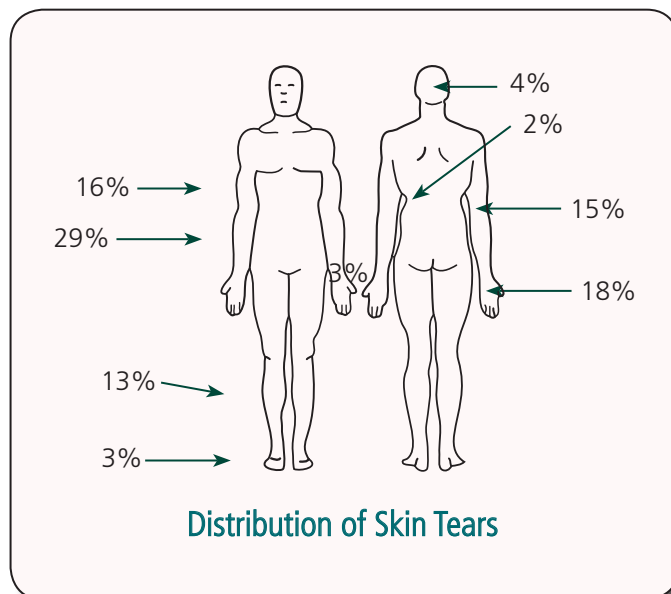
DECISION TREE SUMMARY VERSION

SECTION 3 - SKIN TEAR TREATMENT PROCEDURE 8

SKIN TEAR PROTOCOL

Rationale

Skin tears are usually quite painful,¹ and are the most common wound type among the elderly.² It is estimated that at least 1.5 million skin tears occur annually among institutionalized adults in the USA,^{1,2} with 14% of patients suffering from skin tears each month.^{3,4} A combined analysis suggests that the average distribution of skin tears is: head 4%, biceps area 16%, elbow 15%, forearm 29%, top of hand 18%, trunk/back 2%, shin 13%, top of foot 3%, and other sites 1%.^{2,5} They can become infected and may heal slowly in compromised patients.^{4,6} As our population ages, it is becoming increasingly important for all health care providers to learn how to manage skin tears to promote quick, pain-free healing while preventing infection and other complications.



Definition

In 1993, Payne and Martin published their revised definition of a skin tear: "A traumatic wound occurring principally on the extremities of older adults, as a result of friction alone or shearing and friction forces which separate the epidermis from the dermis (partial thickness wound) or which separate both the epidermis and dermis from the underlying structures (full thickness wound)."⁷ Payne and Martin also developed the standard system for categorizing skin tears (detailed below).⁷

Pathophysiology of Skin Tears

Skin tears become increasingly common with age because:

- the skin thins internally and contains less subcutaneous fat,⁸ especially at the shins, face and back of the hands¹
- elasticity is reduced because collagen and elastin in the skin degenerates^{7,8,9}
- natural lubrication is diminished due to reduced functioning of the sweat and sebaceous glands⁹
- the capillaries become fragile and disorganized, leading to easy bruising and reduced blood supply^{7,8,9}
- the dermal-epidermal junction is weakened because the rete ridges that keep the dermis and epidermis locked together are flattened, making aging skin especially susceptible to injury from friction and shear; when the epidermis is moved, the dermis may remain stationary rather than moving with it^{7,8,9}

Steroid use thins the skin and anticoagulants damage capillaries,⁶ so younger persons on these medications are also at increased risk for skin tears.⁵

Risk Factors

Individual factors which increase susceptibility to skin tears include:

- nutritional deficits, particularly insufficient protein and essential fatty acids, which are vital to skin health^{5,9}
- edema or dehydration, which compromise skin health and make it more susceptible to injury^{3,5,8}
- having visible evidence of a fragile skin capillary bed, such as red splotches, purpura or bruising⁹ (skin tears are more likely to occur over such areas)⁵
- age over 85 is associated with the most pronounced skin changes and the most risk of skin tears^{5,9,10}
- sensory and cognitive deficits,⁵ especially verbal communication deficits
- stiffness, from contractures, Parkinson's Disease, etc., because transfers are more difficult⁵
- ambulatory impairments – 18% of all skin tears occur while transferring patients,^{2,5} 25% are wheelchair injuries,² and patients requiring total care for all activities of daily living are at highest risk for skin tears³
- about 50% of the time the cause of a skin tear is not determinable^{1,2}

As might be expected, the individuals most at risk for skin tears are those with a past history of skin tears^{1,2,5}

Prevention

Prevention of skin tears is two-pronged: improving skin health and decreasing the risk of trauma. Implementing prevention protocols can result in a significant reduction in skin tears and is financially sound.

Steps for Improving Health:

1. Ordinary soaps and alcohol dry the skin, exacerbating the problems of the elderly.⁹ Use soaps sparingly,⁹ and choose soaps with a pH of about 5.5⁹ which contain an emollient¹² or humectant.⁹
2. Bathe patients gently, using warm rather than hot water¹³, soaking rather than scrubbing off crusts.^{14,15}
3. Pat skin, rather than rubbing it dry.^{14,15}

Steps for Minimizing Injury from Trauma:

1. Encourage older adults to wear long sleeves and long pants to provide a layer of protection for their skin.¹
2. Secure padding to bed rails, wheelchair arms and leg supports, and other furniture and equipment to protect patients from injury due to bumps.¹
3. Use no tape, or only tapes that are easily removed on elderly patients, preferring stockinettes and wraps for securing dressings and drains.¹ If tape or bordered dressings are used, pull the edge parallel to the patient's skin to loosen the adhesive bond before lifting the dressing away.
4. Teach family members and health care workers proper lifting and turning techniques to prevent friction, shearing and bruising.¹ Older adults must be handled very gently.^{1,15} Use facial cues to determine if pain is present.
5. Provide a well-lit environment with furniture arranged thoughtfully to minimize bumps and falls.¹

Treatment and Prevention Procedure

Goal: The desired outcome of this procedure is to maximize healing while minimizing complications and pain^{1,4,16,17} associated with skin tears. Implementation of the prevention aspects of the protocol is expected to result in significant cost savings due to a diminished incidence of skin tears.^{4,5} Treatment costs may also be reduced.¹⁶

Manage skin tears step-by-step:

- I. Assess the cause and dimensions of the skin tear. Categorize the skin tear using the Payne-Martin Classification System (below).^{1,2}
- II. Cleanse very gently with normal saline^{1,18} to remove clots and debris and rehydrate any remaining flap.^{14,18} Stop any bleeding with light direct pressure. Pat dry.
- III. Approximate edges of any remaining flap without applying tension using a few thin adhesive strips,^{10,14,16} allowing space for exudate to drain from the edge of the wound.¹⁶ Gently manipulate the flap using a moist cotton-tipped applicator, rather than hard instruments.¹⁴
- IV. Cover with an appropriately-sized PolyMem® or Shapes® by PolyMem Island Dressing, or a non-adherent PolyMem Wound Dressing held in place with a self-adhering wrap, gauze wrap or stockinette.^{14,15,16}
- V. Document pain, location, size, depth, classification, treatment, teaching, and proposed prevention strategies.
- VI. Follow-up, checking the dressing daily. Leave it in place for three days unless exudate visible through the dressing reaches the approximate edge of the wound, indicating the need for an earlier dressing change. This is most common in Category IIB and III skin tears with large amounts of tissue loss. Do a routine dressing change* after three days, and then every four days until the wound is completely closed.¹⁶
- VII. Prevent Recurrence by implementing the applicable changes and teaching described in “Prevention” sections to improve skin health and prevent trauma.^{4,5,14}

***With PolyMem formulations, the dressing change process is simple – just remove the old dressing and place a new dressing on the wound.**^{14,16}

- PolyMem dressings contain a moisturizer and are non-adherent to the wound surface, assuring pain-free removal and reducing the risk of disrupting healing tissues during the dressing change.¹⁶
- PolyMem absorbs up to ten times its weight in exudate, decreasing the risk of maceration.
- No wound cleansing is routinely performed during the dressing change process because PolyMem dressings provide continuous cleansing of the wound.¹⁶
- The semipermeable backing optimizes oxygen and moisture vapor passage while protecting the wound from liquids and bacteria.¹⁶
- Usually patients experience dramatic pain relief when PolyMem dressings are applied.¹⁶ Animal studies suggest that the ingredients in PolyMem dressings interrupt the pain pathways at the wound site while enhancing healing.¹⁷
- The PolyMem formulation has also been shown in animal studies to reduce edema and bruising while decreasing the spread of inflammation into surrounding uninjured tissues.^{17,19}

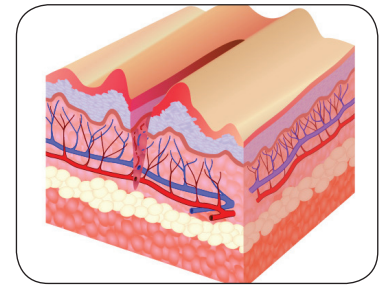
Always assess for pain and infection and follow-up appropriately.

PAYNE-MARTIN CLASSIFICATION SYSTEM (revised 1993):⁷

Category I: Skin Tears without tissue loss

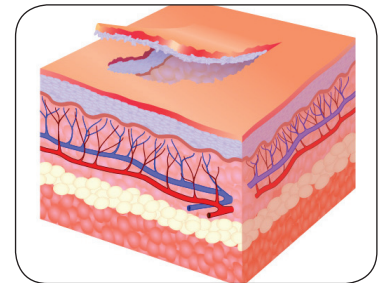
A. Linear type

A linear skin tear is a full thickness wound occurs in a wrinkle or furrow of the skin. Both the epidermis and the dermis are pulled apart as if an incision has been made, exposing the tissue below.



B. Flap type

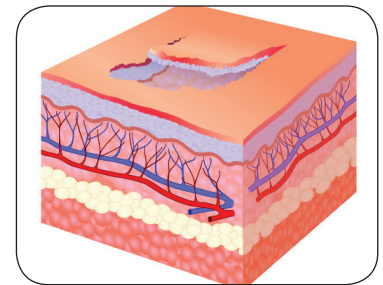
A flap type skin tear is a partial thickness wound in which the epidermal flap can be completely approximated or approximated so that no more than one (1) millimeter of dermis is exposed.



Category II: Skin tears with partial tissue loss

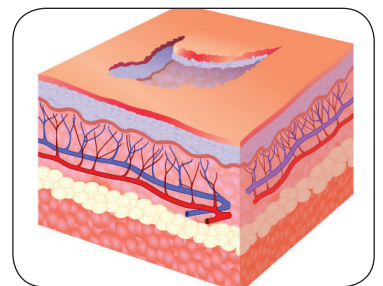
A. Scant tissue loss type

A skin tear with scant tissue loss is a partial thickness wound in which 25 percent or less of the epidermal flap is lost and in which at least 75 percent or more of the dermis is covered by the flap.



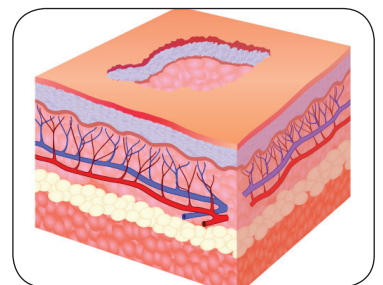
B. Moderate-to-large tissue loss type

A skin tear with moderate-to-large tissue loss is a partial thickness wound in which more than 25 percent of the epidermal flap is lost and in which more than 25 percent of the dermis is exposed.



Category III: Skin tears with complete tissue loss

A skin tear with complete tissue loss is a partial thickness wound in which the epidermal flap is absent.



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Skin Tears - Protocol Summary

DESIRED OUTCOME: The goal of this procedure is to maximize healing while minimizing complications and pain associated with skin tears. Implementation of the prevention aspects of the protocol is expected to result in significant cost savings due to a diminished incidence of skin tears. Treatment costs may also be reduced.

DEFINITION: A skin tear is a traumatic wound occurring principally on the extremities of older adults as a result of friction and/or shearing forces which separate the epidermis from the dermis (partial thickness wound) or which separate both the epidermis and dermis from the underlying structures (full thickness wound). – Payne & Martin, 1993

DISCUSSION: Skin tears become increasingly common with age because the skin thins, elasticity is reduced, natural lubrication is diminished, the capillaries become fragile, and the dermal-epidermal junction is weakened, making aging skin especially susceptible to injury from friction and shear. Use of steroids and anticoagulants magnifies the risk of skin tears. Nutritional, ambulatory, cognitive and sensory deficits increase the risk of skin tears even more. Skin tears tend to be painful. They occur most often on the elbows, forearms, hands, and lower legs. Skin tears can become infected and may heal slowly in compromised patients.

MANAGE AND PREVENT SKIN TEARS USING THIS STEP-BY-STEP PROCEDURE:

- I. Assess** the cause and dimensions of the skin tear. Categorize the skin tear using the Payne-Martin Classification System (abbreviated below).
- II. Cleanse** very gently with normal saline to remove clots and debris and rehydrate any remaining flap. Stop any bleeding with light direct pressure. Pat dry.
- III. Approximate** edges of any remaining flap without applying tension using a few thin adhesive strips, allowing space for exudate to drain from the edge of the wound. Gently manipulate the flap using a moist cotton-tipped applicator.
- IV. Cover** with an appropriately-sized PolyMem® or Shapes® by PolyMem Island Dressing, or a non-adherent PolyMem Wound Dressing held in place with a self-adhering wrap, gauze wrap or stockinette.
- V. Document** pain, location, size, depth, classification, treatment, teaching, and prevention strategies.
- VI. Follow-up**, checking the dressing daily. Leave it in place for three days unless exudate visible through the dressing reaches the approximate edge of the wound, indicating the need for an earlier dressing change. This is most common in Category IIB and III skin tears with large amounts of tissue loss. Do a routine dressing change after three days, and then every four days until the wound is completely closed.
- VII. Prevent Recurrence** by implementing changes & teaching caregivers.
 - A. To improve skin health:
 1. Use soaps sparingly
 2. Bathe patients gently, soaking rather than scrubbing off crusts.
 3. Pat skin, rather than rubbing it dry.
 4. Apply a once-a-day moisturizing cream to the skin immediately after the bath.
 5. Correct any underlying nutritional and hydration deficiencies.

B. To diminish trauma:

1. Encourage the wearing of long sleeves and long pants to provide a layer of protection for skin.
2. Pad bed rails, wheelchair arms and leg supports, and other furniture and equipment.
3. Use no tape, or only easily removable tape, preferring wraps and stockinettes for securing dressings and drains. If tape or bordered dressings are used, pull the edge parallel to the skin to release the adhesive bond before lifting the dressing away.
4. Teach family members and health care workers proper lifting and turning techniques to prevent shearing and bruising. Use draw sheets and other lifting techniques. Handle elderly people gently!
5. Provide a well-lit environment with furniture arranged thoughtfully to minimize bumps and falls.

Abbreviated Payne-Martin Classification System:

Category I: Skin tears without tissue loss

A. Linear – occurs at wrinkle or furrow: Full thickness, as if an incision has been made

B. Flap – partial or full thickness wound with an epidermal flap which can be approximated to within 1mm of complete closure

Category II: Skin tears with partial flap tissue loss

A. Scant – less than 25% of the epidermal flap is lost

B. Moderate to Large – More than 25% of the epidermal flap is lost

Category III: Skin tears with complete flap tissue loss

A partial or full thickness wound in which an epidermal flap is completely absent.

***With PolyMem formulations, the dressing change process is simple – just remove the old dressing and place a new dressing on the wound.**

- PolyMem dressings contain a moisturizer and are non-adherent to the wound surface, assuring pain-free removal and reducing the risk of disrupting healing tissues during the dressing change.
- PolyMem absorbs up to ten times its weight in exudate, decreasing the risk of maceration.
- No wound cleansing is routinely performed during the dressing change process because PolyMem dressings provide continuous cleansing of the wound.
- The semipermeable backing optimizes oxygen and moisture vapor passage while protecting the wound from liquids and bacteria.
- Usually patients experience dramatic pain relief when PolyMem dressings are applied. Animal studies suggest that the ingredients in the dressing interrupt the pain pathways at the wound site.
- The PolyMem formulation has also been shown in animal studies to reduce edema and bruising.

Always assess for pain and infection and follow-up appropriately.

MANAGING AND PREVENTING SKIN TEARS – PROTOCOL SUMMARY

Definition: A skin tear is a traumatic wound occurring principally on the extremities of older adults as a result of friction and/or shearing

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Discussion: Skin tears become increasingly common with age because the skin thins, elasticity is reduced, natural lubrication is diminished, the capillaries become fragile, and the dermal-epidermal junction is weakened, making aging skin especially susceptible to injury from friction and shear. Use of steroids and anticoagulants magnifies the risk of skin tears. Nutritional, ambulatory, cognitive and sensory deficits increase the risk of skin tears even more. Skin tears tend to be painful. They occur most often on the elbows, forearms, hands, and lower legs. Skin tears can become infected and may heal slowly in compromised patients.

Goal: Maximize healing and minimize complications and pain by managing skin tears step-by-step:

ASSESS

Assess the cause and dimensions of the skin tear. Categorize the skin tear using the Payne-Martin Classification System (abbreviated below).

CLEANSE

Cleanse very gently with normal saline to remove clots and debris and rehydrate any remaining flap. Pat dry.

Is There Bleeding?

Stop any bleeding with light direct pressure.

Is There A Remaining Flap?

APPROXIMATE

Approximate edges without applying tension using a few thin adhesive strips, allowing space for exudate to drain from the edge of the wound. Gently manipulate the flap using a moist cotton-tipped applicator.

COVER

Cover with an appropriately-sized PolyMem® or Shapes® by PolyMem Island Dressing, or a non-adhesive PolyMem Wound Dressing held in place with a self-adhering wrap, gauze wrap or stockinette.

DOCUMENT

Document pain, location, size, depth, classification, treatment, teaching, and proposed prevention strategies.

FOLLOW-UP

How significant is the skin tear? Use the Payne-Martin System.

Payne-Martin Classification System:
(Abbreviated)

Category I: Skin tears without tissue loss

A. Linear – occurs at wrinkle or furrow: Full thickness, as if an incision has been made

B. Flap – partial or full thickness wound with an epidermal flap which can be approximated to within 1mm of complete closure

Category II: Skin tears with partial flap tissue loss

A. Scant – less than 25% of the flap is lost

B. Moderate to Large – More than 25% of the epidermal flap is lost

Category III: Skin tears with complete flap loss

A partial or full thickness wound in which an epidermal flap is completely absent

Category I & IIA Skin Tears

Do a routine dressing change* after three days, and then every four days until the wound is completely closed.

Category IIB & III Skin Tears

Check the dressing daily for the first three days, leaving it in place unless the drainage visible through the dressing reaches the approximate edge of the wound, indicating the need for an earlier dressing change. Do a routine dressing change* after three days, and then every four days until the wound is completely closed.

PREVENT RECURRENCE

Improve Skin Health

1. Use soaps sparingly.
2. Bathe patients gently, soaking rather than scrubbing off crusts.
3. Pat skin, rather than rubbing it dry.
4. Apply a once-a-day moisturizing agent to the skin immediately after the bath.
5. Correct any underlying nutritional and hydration deficiencies.

Diminish Trauma

1. Encourage the wearing of long sleeves and long pants.
2. Pad bed rails, wheelchair arms and leg supports, and other furniture and equipment.
3. Use no tape, or only easily removable tape, preferring wraps and stockinettes for securing dressings and drains. If tape or bordered dressings are used, pull the edge parallel to the patient's skin to loosen the adhesive bond before lifting the dressing away.
4. Teach family members and health care workers proper lifting and turning techniques to prevent shearing and bruising. Use draw sheets and other lifting techniques. Handle elderly people gently!
5. Provide a well-lit environment with furniture arranged thoughtfully to minimize bumps and falls.

Skin Tears Treatment Procedure

Goal:

The desired outcome of this procedure is to maximize healing while minimizing complications and pain associated with skin tears. Implementation of the prevention aspects of the protocol is expected to result in significant cost savings due to a diminished incidence of skin tears. Treatment costs may also be reduced.

Equipment:

- Clean gloves
- Thin adhesive strips
- Normal saline for irrigation with a 35cc syringe with 19 gauge angiocath or equivalent wound irrigation system
- Appropriately-sized PolyMem® or Shapes® by PolyMem Island Dressing (or a non-adherent PolyMem Wound Dressing plus a self-adhering wrap, gauze wrap or stockinette)
- 4 x 4 gauze sponges
- Impervious disposable bag
- Cotton-tipped applicators

PROCEDURE

I. Assess the cause and dimensions of the skin tear. Categorize the skin tear using the Payne-Martin Classification System. Put on gloves.

II. Cleanse very gently with normal saline to remove clots and debris and rehydrate any remaining flap. Stop any bleeding with light direct pressure. Pat dry with gauze sponge.

III. Approximate edges of any remaining flap without applying tension using a few thin adhesive strips, allowing space for exudate to drain from the edge of the wound. Gently manipulate the flap using a moist cotton-tipped applicator, rather than hard instruments. Dispose of waste in impervious bag.

IV. Cover with an appropriate-sized PolyMem® or Shapes® by PolyMem Island Dressing, or a non-adherent PolyMem Wound Dressing held in place with a self-adhering wrap, gauze wrap or stockinette.

V. Document pain, location, size, depth, classification, treatment, teaching, and proposed prevention strategies.

VI. Follow-up, checking the dressing daily. Leave it in place for three days unless exudate visible through the dressing reaches the approximate edge of the wound, indicating the need for an earlier dressing change. This is most common in Category IIB and III skin tears with large amounts of tissue loss. Do a routine dressing change* after three days, and then every four days until the wound is completely closed.

VII. Prevent Recurrence by implementing the five “Steps for improving skin health” and the five “Steps for minimizing injury from trauma” described in detail in the “Prevention” section of the complete Skin Tear Protocol.

RATIONALE/EMPHASIS

I. Assessment is essential for appropriate documentation and follow-up. The Payne-Martin Classification System is the accepted standard.

II. The flap will act as an “auto-graft.” Use saline, rather than water or wound cleanser, to maximize likelihood of flap viability. Blood pooling under the flap may prevent it from reattaching to the wound bed.

III. The flap must be kept moist and handled very gently to keep it healthy for reattachment.

IV. PolyMem dressings contain a moisturizer and are non-adherent to the wound surface, assuring pain-free removal and reducing the risk of disrupting healing tissues during dressing changes. PolyMem absorbs up to ten times its weight in exudate, decreasing the risk of maceration. The semipermeable backing optimizes oxygen and moisture vapor passage while protecting the wound from liquids and bacteria.

V. Usually patients experience dramatic pain relief when PolyMem dressings are applied. Animal studies suggest that the ingredients in PolyMem dressings interrupt the pain pathways at the wound site while enhancing healing.

VI. With the PolyMem formulation, the dressing change process is simple – just remove the old dressing and place a new dressing on the wound. No wound cleansing is routinely performed during the dressing change process because PolyMem dressings provide continuous cleansing of the wound.

VII. Studies consistently show that implementing protocols for the prevention of skin tears results in a dramatically decreased incidence of these injuries.

