

Improving Skin Tear Outcomes Using Olivamine® a Topical Nourishing Skin Care Cream*; Prevention of Skin Tears with the Elderly

GOALS AND OBJECTIVES

The risk of skin tears increases with age, being common in the “old-old” as well as in patients with alterations in sensory status, or sensation. A history of skin tears also increases the risk as well as impaired nutritional status, poor fluid intake, and increased acuity. Studies have shown that patients who are totally dependent on caregivers for ADLS (bathing, grooming, and dressing) have the greatest risk for the development of skin tears. The next group at highest risk would include those residents who are more independent and mobile about the facility or at home. Residents with poor eyesight are at risk to bump into environmental hazards causing trauma to their hands, arms, or lower legs.

As we age, skin cells are less able to produce sebum, repair and defend themselves resulting in development of scaling, pain, pruritis and thinning of the stratum corneum many times resulting in skin tears and infections. Our population had exhibited all of these signs and symptoms.

Our objective was to decrease the skin tear rate in our long-term care facility in upstate New York, where the average age is 86 years. The study started on September 7, 2007 with 44 residents. Eight dropped (6 were discharged and 2 refused to participate) from that original number. Since then we have had one death due to unrelated causes and added four more residents to this ongoing study.

PURPOSE

A trial was initiated for 4 weeks. In the past a balsam peru, castor oil, and trypsin ointment** would have been used as treatment for the poor skin turgor, itching or pain with questionable results.

The current petroleum based skin cream would be replaced with a new dimethicone based product containing nourishing ingredients for patients that met the inclusion criteria. The repair cream formulation was selected for the ingredients (i.e. vitamin B3 and B6 for itching, antioxidants, amino acids to build collagen) may be capable of nourishing, repairing dermal damage, and enhancing the function of stratum corneum.

METHODS

Pre study at-risk inclusion criteria was determined by identifying the risk of skin trauma (skin tears, abrasions and bruising) using the Skin Trauma Risk Assessment Sheet widely used within our facility and developed by our wound and skin team. The tool is completed on admission, by the RN charge nurse, weekly for four weeks, and then quarterly. The scale includes risk factors such as medications, presence of purpura, turgor and level of assist required. Scores between 1 and 6 indicate moderate risk while scores between 6 and 12 indicate high risk.

Patients that scored high risk were selected to receive application of new skin care cream with Olivamine twice per day to arms and legs, after cleansing, for a period of 4 weeks. Skin was evaluated weekly. To ensure compliance a physicians order was written for the above treatment and a licensed nurse was required to sign the treatment administration record for the treatment.

Patients that were not selected for the study continued to use the petroleum based skin products.

CASE STUDY #1

FH is an 84yr. old female resident with a medical history that includes diabetes, Alzheimer’s with dementia, hypertension and coronary artery disease. She is totally dependant on staff for her care. Her medications include anticoagulants. Risk factors include history of skin tears, averaging 2 to 3 skin tears per month, usually on the lower forearms and wrist. Her unique high risk also includes that she was combative at times and had a tendency to “pick” at her skin as well as clothing and bandages. Plan of action included food and fluid studies (trying to improve hydration), long sleeves or gerigloves and the topical nourishing skin care cream containing Olivamine to arms and legs twice daily.



Left arm 9-7-07



Left arm close-up 11-7-07



Right arm 10-5-07



Right arm 11-7-07

CASE STUDY #2

PC is an 85 year old with insulin dependant diabetes, renal insufficiency, hypertension and PVD. Although she is alert and appears to be cognitively intact, she has severe short term memory loss. She is taking anticoagulants, pain medications, as well as insulin, and aspirin, PC has a long history with skin tears. PC likes to wear jewelry including rings and multiple bracelets that contribute to her injuries. She is obese and relies on a wheelchair for activity.

The plan of action includes referring her to the dietitian for evaluation and encouragement of fluid intake. Wear long sleeves and begin the repair cream to arms and legs twice daily. She was also encouraged to wear her jewelry on the outside of her clothing.



Left arm 9-7-07



Left arm 11-7-07

DISCUSSION

Skin tears occur principally on the extremities as a result of friction, shearing or trauma and result in a separation of the epidermis from the dermis or both the epidermis and the dermis from underlying structures. Acute and long-term staff need to be aware of these risk factors and perform inspections of their elderly patient’s skin on admission and on a scheduled basis after admission in order to implement interventions to manage those risk factors detected. It is estimated that at least 1.5 million skin tears occur in the elderly each year, with prevalence rates between 14-24%. The anatomy of the skin has much to do with the etiology and the cause of skin tears. Although skin tears are thought to be difficult to prevent and treat, the use of a good topical product can lessen the risk of skin tears. Key measures such as cleaning, moisturizing, and nourishing the skin with advanced skin care products that are effective in reducing the incidence of skin tears. Also the products must be easy to apply, gentle to fragile skin, absorb quickly, have a pleasant and fresh scent, leave the skin feeling soft, produce immediate visual results and be proven to make a difference with continued use.

CASE STUDY #3

EF is an elderly female with a terminal diagnosis, with very poor nutrition and hydration. She suffers with severe contractures resulting from a CVA. She has a history of skin tears and while gerigloves could be ideal, they are difficult to apply due to the contractures. There is a concern for trauma with staff handling of EF. Dietary evaluation is needed for nutrition as well as hydration. She died on 11-30-07, and while only in the study for a few months, she showed significant improvement in her skin. Typical treatment for skin tears in our facility includes approximating with steri-strips and covering with a non-adherent dressing.

The plan of action included pain management, and pressure redistribution for comfort as well as pressure ulcer prevention. Increase nutritional intake as tolerated. The licensed staff will apply skin cream twice daily to her arms and legs.



Left arm 9-7-07



Left arm 11-16-07



Right arm 9-7-07



Right arm 11-16-07

CASE STUDY #4

RC is a 91 year old female with a history of osteoarthritis, cognitive impairment, and short term memory loss. She takes aspirin and pain medications. RC has a significant history of skin tears, poor skin turgor, and geriatric purpura to her lower extremities. She does not meet her critical fluid levels and nutrition is not ideal.

The plan of care for RC includes complete fluid and nutrition intake study as well as encouraging fluids as tolerated. She will wear long sleeves to help prevent the “picking” to her extremities. RC’s nails will be kept short and filed. The licensed nurse will apply the skin cream to her extremities twice per day.



11-19-07



12-17-07

RESULTS

Positive outcomes for the patients included skin regeneration as well as improvement in the skin integrity (elasticity, diminishing thinness, ability to tolerate friction, decreased scaling and noticeable shedding) diminishing purpura, relief of pain and itching, reduction of skin tears and protection from damage related to dehydration. After a four-week trial of the skin cream with Olivamine, reoccurrence rates were significantly reduced.

The intervention for prevention and resolution of skin tears was so successful the trial was extended and continues today. The staff reported a dramatic improvement in overall skin health within a very short time frame. There was a decrease in product costs, improved patient dignity and most importantly a skin and wound team that is excited about skin care. The committee recommended that this be the product of choice for all residents.

REFERENCES

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4. McGough-Csamy J, Kopac C. Skin tears in institutionalized elderly: An epidemiological study. *Ostomy Wound Manage*. 1998 Mar; 44(3A Suppl):14S-24S.

*Remedy Skin Repair Cream from Medline Industries, Inc. Mundelein, IL.

**Xenaderm from Healthpoint , Ft. Worth, TX