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Prevention and Treatment of Incontinence-Associated Dermatitis (IAD): Contributes of Nursing Intervention

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Introduction

Incontinence-Associated dermatitis (IAD) is a combination of skin changes caused by the presence of confluent moisture, being characterized by prolonged skin exposure to elimination. This is a rather frequent condition, taking into account that there is a significant proportion of people, most of whom are aged 65 years or over and are admitted to acute or long-term care, suffering from urinary and/or fecal incontinence [1]. Typically it is recognized as an inflammation of the skin surface characterized by redness (skin rush), which mainly affects the region of the thighs, buttocks and scrotum, in males and large lips in females [1,2]. This type of injury translates the reaction of the skin to the aggressor agent, immediately compromising its ability to act as a protective barrier [3]. If IAD is not identified and treated in a timely manner, this redness and/or rush may progress rapidly to the local formation of abrasions and vesicular lesions that with prolonged exposure to risk factors may trigger an infectious process with high severity [4]. A cycle begins where a progressive increase of local inflammation and loss of cutaneous integrity is observed [1].

Brunner et al. [5] point out four risk factors that are related to loss of cutaneous integrity related to incontinence, namely, the presence of moisture, alteration of skin pH, colonization with microorganisms and friction. Chemically, skin contact with products of vesical and intestinal elimination gives rise to an increase in pH relative to physiological values, which reduces its ability to act as a barrier against the proliferation of microorganisms [6,7]. Prolonged exposure to a constantly moist environment, locally causes a skin maceration that when evolving to epidermal erosion, makes the skin more vulnerable to the harmful effect of pressure, increased susceptibility to the development of pressure ulcers for Staphylococcus infectionand may progress to cellulitis and necrotizing fasciitis [8].

Some studies on the subject reveal the importance of nursing intervention in the prevention and treatment of IAD. Constant skin assessment, adequate hygiene care and continence management are fundamental nursing activities in IAD prevention [9]. Kottner et al. [10] emphasizes that periodic skin observation and preventive care should be especially targeted at people who in addition suffer from fecal/urinary incontinence or present other comorbidities, such as diabetes mellitus, increased body mass index and high functional dependence.

Skin cleansing immediately after evacuating/urinating and avoiding excessive irritation of the skin, contributes to the reduction of the occurrence of IAD [9]. The process of drying the skin through evaporation is recommended to mitigate friction damage caused by the friction of a towel [11]. In the presence of fecal matter, it is advisable to wash the region with warm water and dry the skin well before application of a washing product [9]. Cleansing of the skin of the perineal region should involve a product whose pH allows the maintenance of an acid environment, value between 5.4 and 5.9. Cleaning products provide an alternative to cleansing the perineal skin with soap and water [11].

Skin subject to constant humidity requires other care, which consist of applying a moisturizer and subsequently a barrier cream [5]. Skin protection is an essential stepand it is therefore advisable to use a long-lasting barrier cream or polymeric spray film [5,9]. The use of barrier creams may be a help in preventing the onset of lesions [9], it works as a water repellent and is used to prevent dermal inflammation [12]. In cases of scaly and dehydrated skin, the use of an emollient or a barrier cream is strongly recommended [9].

The skin protectors with petrolatums and zinc oxide based are used as skin protectors against irritations and hydration, for their easy accessibility and reduced cost. However, they do not have an effective barrier effect, their white and opaque coloration prevents an adequate observation of the state of the skin, remaining a thin deposit that can cause skin lesions in the attempt of removal [11]. It is preferable to apply the polymer film which is constituted by an acrylic blend, forming a non-irritating barrier film, allows the gas exchanges of water vapor and oxygen between the skin and the exterior, as well as preventing contact with the body fluids. It is not recommended for use in category I pressure ulcers without the moisture factor [5,9].

The use of a wipe impregnated with a solution of 3% dimethicone resulted in a significant reduction in the prevalence of IAD and a tendency for less severity of cutaneous lesions. This active substance of several barrier creams functions as a filler between the scaly corneocytes, acting as a barrier against confluent moisture [11]. In severe IADs, which are characterized by the presence of erosive lesion at the level of the epidermis and dermis, with exudate and associated pain, it is recommended to apply a silicone foam dressing for treatment. This dressing can also be used as a barrier to decrease the incidence of IAD. The use of more occlusive dressings, such as hydrocolloids, is strongly contraindicated since they increase the risk factor - humidity [13].

The use of absorption products in size appropriate to each situation, helps to prevent injuries associated with the presence of confluent moisture [9]. The use of a diaper incorporating a frontal zone of absorption and avoiding the reflux mechanism, allows a significant improvement of present lesions associated with the presence of moisture [12].

The nursing interventions directed at the person with IAD are positioned at the level of prevention, diagnosis and healing. In a transversal way, all the studies pointed to the importance of an adequate inspection of the skin, constituting the gold standard of the prevention and diagnosis of IAD. With regard to the prevention of IAD, generally, 3 stages are recommended in the scope of the nursing intervention: (1) cleansing the skin; (2) application of emollients/ moisturizers; (3) skin protection. In healing it is advised to perform 2 or 3 steps: (1) clean the skin; (2) skin protection; (3) exudate management (if severe DAI) [13-20].

The implementation of the set of identified nursing interventions can also be easily applied in other regions of the body surface susceptible to damage caused by the presence of humidity, such as tracheostomies and other stomas, wounds with abundant exudate, people undergoing oxygen therapy or profuse sweating, especially in cases of morbid obesity [9]. The prevention and healing of IAD is a health outcome associated with nursing care. Their repercussions were more evident in the health economics segment, however their gains have the same translation in improving the quality of life, reducing the discomfort and pain of the person with IAD [10].

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