

# Dermatological changes in the elderly: risk assessment for the development of skin tears

## Abstract

Located in South America, according to the last demographic census, Brazil, it experiences a process of demographic transition. Currently, the country has 190.755.199 million inhabitants, and these, 23.5 million are elderly.<sup>1</sup> In difficulty of aging process, the individual becomes predisposed to reduce elasticity, alteration in the matrix of collagen alteration in skin texture, vascular fragilization, hydroelectrolytic deficits, among others, which leave him susceptible to the occurrence of tears of skin.<sup>2,3</sup> For an International Skin Skin Panel, these lesions are characterized by the breakage of the skin, as a result of friction, separation as layers of the skin leading to a formation of a flap, which, depending on the characteristics, can allow the realignment, in its anatomical position without excessive traction. The characteristics of the flap and peri-lesion skin, are classified directly in a case in different categories, which are favored by discussion of plans of care/prevention.<sup>4,5</sup> In view of the above, the identification of dermatological cells capable of predisposing the elderly to the occurrence of skin tears, constitutes a routine practice of health practices, considering that it is a prevention of this disease can avoid serious complications, besides reducing the risk of Comorbidities and/or mortality in the population segment.<sup>6</sup>

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## Case report

This is a quantitative, descriptive study whose objective was to identify dermatological alterations related to the development of skin tears in the elderly, in the area covered by a Basic Health Unit of a municipality in the south of Brazil. The study included 42 elderly people aged 80 years or over, and a structured interview and inspection of the skin of the elderly by the researchers. The research was approved by the Committee of Ethics in Research with Human Beings of the Federal University of Santa Catarina, through the Consubstantiated Opinion number 1.619.677, under CAAE number: 56298116.4.0000.0121, respecting Resolution CNS 466/2012.

The participants age ranged from 80 to 100 years of age, with a prevalence of 80 to 85 years (59.5%); 28 (66.7%) were female; 38 (90.5%) were white. When analyzing the skin of the study participants, it was found that in 41 elderly people (97.6%) they had dermatological alterations, 35 of which were the most frequent resected skin (83.3%) and the absence of hairs on the lower limbs 24 (57, 1%).

## Discussion

Faced with the dermatological alterations found in the study population, the literature reports that skin dryness is a frequent occurrence in the skin of the elderly, since at this age there is a decrease in the activity of the sebaceous and sweat glands, corroborating the findings of the present study.<sup>7</sup>

In addition, external factors, such as hot bath and the use of bar soap, may also contribute to the appearance of this finding, since the elevated temperature leads to reduction of the natural oiliness of the skin, decreases the lipid mantle, leads to greater dryness And reduces the resistance to the aggression of alkaline substances, leaving the skin susceptible to friction and therefore to rupture. Thus, it is recommended to use soaps with acidic pH, since they do not interfere in an intense way in the skin flora, since they are close to the physiological pH of the skin.<sup>5,8,9</sup>

Regarding the absence of lower limbs, this was also observed in a large part of the sample. Although body hairs are responsible for protecting the skin against solar radiation, these help in reducing the friction with the skin.

When analyzing the elderly who presented this condition, it was observed that 21.4% (=09) had the Ankle-Brachial Index (ABI) between 0.41 and 0.90 mmHg. Normal ABI varies from 0.91 to 1.30 mmHg, but it is considered altered when it is <0.90 or >1.30 mmHg.<sup>10</sup>

This fact suggests possible venous fragility. According to the degrees of Lerich-Fontaine, the first change due to impairment of the blood supply in the lower limbs is the lowering of the hairs on the lower limbs, due to the oxygen and other deficient nutrients, thus increasing the risk of occurrence of skin tears. Since it reduces the resistance of the skin to the friction against an aggressive surface.<sup>11</sup>

## Conclusion

The results of the present study verified changes commonly observed in the elderly, however, these constitute risk factors for the occurrence of skin tears, since they weaken the skin. Thus, it is up to the nurse and other health professionals who act directly in the care of the elderly, to include in their care horizon the role of educator for health, seeking strategies that allow an aging with health. The adoption of care technologies, such as the application of scales for risk stratification, should also be part of the day-to-day care of these professionals, as these can facilitate the early prediction of risk, and subsidize discussions, assisting in directing conduct to be taken.

## Acknowledgements

The skin tears constitute an incipient theme, so the publication of this study will contribute to broadening the view of nurses and other health professionals who work in the care of the elderly, regarding the stratification of risk factors for the development of the lesions As well as the development of preventive actions, reflecting in the increase of

the quality of life of the elderly, as well as, in the reduction of costs to the health system, in relation to the treatment of these lesions

## Conflicts of interest

Authors declare there is no conflict of interest in composing this manuscript.

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