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EDITORIAL

DERMATOLOGY

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Optimising the use of urea in dermatology

This supplement of the *International Journal of Clinical Practice* entitled "*The many faces of urea in dermatology*" thoroughly analyses the use of urea in dermatology, from history,[1] to mechanism of action,[2] available formulations,[3] clinical indications[4-6] and non-invasive monitoring techniques.[7]

From the excellent contributions of this issue some considerations can be made.

- Urea represents an old molecule[8-9] still very useful in dermatology and not replaceable with other substances, because of its unique moisturising, keratolytic and antimicrobial properties that are exerted in a dose-dependent manner.[10]
- Urea-based products are widely used and marketed worldwide, with costs generally affordable. They are present in a large variety of formulations (lotions, creams, foams, ointments, gels and lacquers) and concentrations (from 2% to 50%) that are variably available in different countries. Urea generally represents the main active ingredient, or it may sometimes be associated with other substances such as corticosteroids or antifungals, in order to enhance their action.[11]
- Urea is effective in different skin disorders, as demonstrated by the results from several clinical trials, often supported by non-invasive techniques such as measurement of transepidermal water loss (TEWL), skin conductance and capacitance. One of the most interesting peculiarity of urea is the versatility of use (Figure 1). Low concentrations (from 2% to 12%) are very effective as moisturisers and are generally used to treat dry skin of different origin such as xerosis of the elderly or xerosis associated to ichthyosis, atopic dermatitis and psoriasis.[12-13] The main application of urea medium strength concentrations (15%-30%) is represented by diffuse mild-to moderate hyperkeratosis or hyperkeratosis of sensitive areas (eg, face, genital region).[14] Higher concentrations (40%-50%) are mainly utilised in the treatment of localised, severe hyperkeratosis or to obtain nail plate avulsion.[15-16]
- The safety of urea is supported by several studies and by long-lasting use in clinical practice. No toxicity has been reported despite its widespread use, and the side effects (redness, stinging and burning sensation) are uncommon, slight, transient and generally related to higher strength concentrations.[10,11,17] Urea products are in general cosmetically well-accepted by the patients, especially lotions and creams that are nongreasy and easily spreadable on large area of the body.

In conclusion, despite the frequent introduction in the market of new topical moisturising and keratolytic products, urea still represents a cornerstone in the topical treatment and prevention of different xerotic/hyperkeratotic skin conditions.

DISCLOSURES

None to declare.

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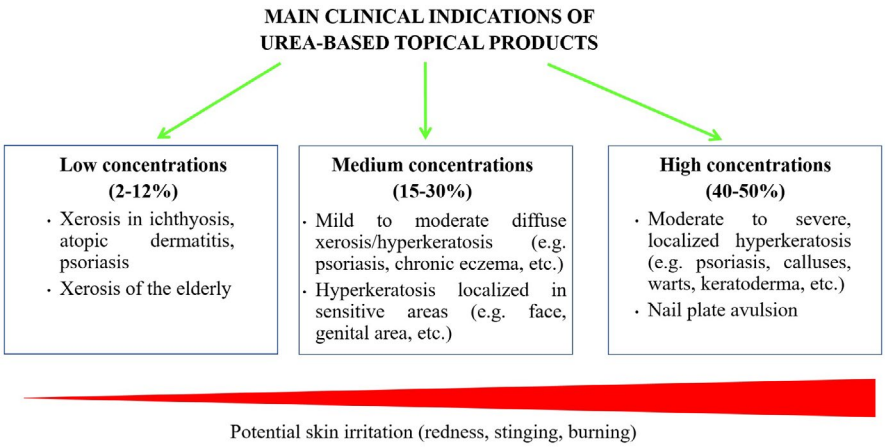

FIGURE 1 Versatility of urea-based products

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