Skin barrier function, a major concern in all healthcare settings, can be compromised by many factors. In the elderly, skin tear incidence (often resulting from shear, friction, or blunt trauma), ranges from 0.9 to 2.7 per person per year in the long-term care population and 14% to 24% in acute care. Friction can occur when skin rubs against itself, bed linens, or absorbent products; wet skin is more likely to be damaged than dry skin. Patients with mixed urinary and fecal incontinence or frequent fecal incontinence have been shown to be at high risk for skin breakdown. Patients with ostomies often experience compromised skin barrier function in the peristomal area. Some type of peristomal skin problem has been reported in up to 55% of individuals with an ostomy. Mechanical and chemical factors are implicated in these skin complications because leakage of urine and feces can be caustic to the skin, leading to peristomal skin irritation. Add adhesive tape trauma, including tension blisters and skin tears, to these factors and the challenges become increasingly evident.

One of the ways to manage at-risk or damaged skin is by applying polymer-based, film-forming materials, such as topical skin protectants, that are barriers to moisture, friction, and other environmental elements. Such non-spreading, film-forming polymer barriers may be less messy than ointment barriers. These polymer-based, film-forming barriers may contain volatile solvents that many clinicians and patients do not want to use. Liquid Skin Protectant (Medline Industries, Inc., Mundelein, IL) avoids the use of solvents altogether. These products bond to the external layer of the skin at a molecular level and cannot be peeled off easily after application. They will slough off as the top layer of the skin is shed naturally, within 3 days during normal skin turnover.

An increasing body of evidence supports cyanoacrylate safety in contact with human skin. Clinical experience with cyanoacrylate skin protectants (or any medical grade cyanoacrylate) shows they are easily applied to skin; the monomer liquid requires approximately 1 minute to “set” and forms a tough, resilient, flexible barrier that cannot be easily washed off. The following scenarios represent clinical cases where a cyanoacrylate skin protectant product was used successfully:

- Skin tear management in the elderly (see Figure 1);
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- Heel ulcer prevention in th elderly;
- Peristomy skin management in adults and neonates;
- Prevention of maceration in NPWT;
- Management of heel fissures.

Cyanocrylates as skin protectants are new in the field of skin care. Further research is needed to explore the limits of use of cyanocrylates under varying clinical conditions.

References
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