

## Localized bullous pemphigoid occurring on surgical scars: An instance of immunocompromised district

We read with great interest the case reported by Sen *et al.*,<sup>[1]</sup> on localized bullous pemphigoid occurring on surgical scars. Bullous pemphigoid may be triggered by trauma and surgical operations,<sup>[1]</sup> but in this case, the time that had elapsed between the trauma of surgery and the development of blisters on the surgical scars was 15 years. We agree with the authors that this long period of time makes Koebnerization unlikely as the explanation.

In our opinion, this is a perfect example of Ruocco's novel concept of the immunocompromised district. Immunocompromised district can be defined as a regional destabilization of the neuro-immunocutaneous system, where the first disease causes an immunological alteration that predisposes to the development of secondary diseases, different from the first one, occurring after an extremely variable lapse of time, and typically confined to the same area. Numerous and varied immunity-related opportunistic diseases (infections, tumors and immune reactions) can take place within immunocompromised districts.<sup>[2]</sup> The term "immunocompromised" generically indicates an alteration of the immune response, and not necessarily a reduction of it. Cases of bullous pemphigoid confined to the hemiplegic side<sup>[3]</sup> and on an accidentally traumatized limb or on an amputation stump,<sup>[2]</sup> may represent other examples of this phenomenon.

Immunocompromised district is usually induced by chronic lymphedema, vaccination, herpetic infections, neurological disorders<sup>[4]</sup> and physical injuries. Surgical procedures or accidental trauma, as well as the scars resulting from them,<sup>[5]</sup> impair both lymph circulation and neuro-immune cross talk in the traumatized area, damaging and immunologically marking these cutaneous areas. In these vulnerable sites, the secondary disease, in this case bullous pemphigoid, could appear after a variable period ranging from days to decades.

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