Development of erythematous scaly lesions in a cervical surgical scar

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Case

A woman, 58 years of age, presented with a scaly rash along a surgical scar. She had a history of type 2 diabetes mellitus, hypertension and psoriasis, which had been followed up by a dermatologist since adolescence. Previous therapies for the psoriasis included topical therapy, phototherapy, methotrexate and acitretin. Because of a lack of improvement on these therapies, she started etanercept 50 mg/week, experiencing an excellent response.

The patient was diagnosed with squamous cell carcinoma of the tongue after 12 months of etanercept therapy. Etanercept was ceased and the patient underwent right partial glossectomy and selective cervical lymph node dissection. Ten weeks after surgery, she developed a 1–3 cm erythematous, non-pruritic, painless, scaly lesion located solely at the cervical surgical scar (Figure 1A, B).

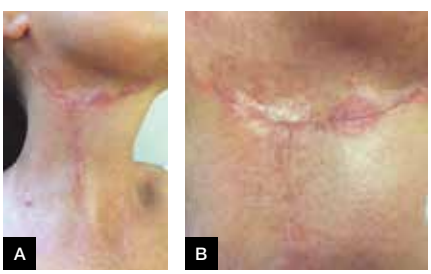

Figure 1. Erythematous scaly lesions located at the cervical scar

Question 1

What is the most likely diagnosis in this patient?

Question 2

What differential diagnoses would you consider?

Question 3

In which skin disorders can this phenomenon also occur?

Question 4

What therapeutic measures would you recommend?

Answer 1

Based on the patient´s history and the appearance of the lesions, the most likely diagnosis is psoriasis located solely at the surgical scar. The development of psoriatic lesions on uninvolved skin of patients with psoriasis as a consequence of trauma can occur and is called Koebner phenomenon (KP). The appearance of lesions typically takes 10–20 days following the trauma. Not all kinds of trauma lead to the phenomenon, and lesions do not follow any anatomical preference as they can occur in areas that are usually spared by the disease.[1] The Koebner response usually follows mechanical or thermal trauma, dermatoses, or allergic or irritant reactions.[2] Its pathogenesis is unknown, although several theories have been proposed. The impact of KP varies according to the underlying disease. A possible explanation for why psoriasis preferentially occurs at scar sites is that changes in vascularity, presence of microscarring or chronic mast cell infiltration may induce memory of an inflammatory event.[1] However, the complex mechanisms that trigger the phenomenon are not fully understood.

Answer 2

Psoriasis lesions may sometimes be confused with eczema, although eczema is usually more pruritic and has less thick scaling than psoriasis.[3] Fungal infections can look very similar, especially when compared to partially resolved psoriasis, which typically shows central clearing. Skin tumours can also mimic psoriasis lesions and should be suspected in cases of an isolated lesion similar to a plaque of psoriasis that slowly enlarges despite treatment.[4]

In the case of this patient, the history of neck surgical intervention cannot be overlooked; therefore, another differential diagnosis is surgical wound infection. However, this hypothesis is less likely because the patient did not present with fever, skin swelling, fluid collection or purulent discharge.

Answer 3

Other skin diseases can arise at sites of cutaneous injury, resulting in an isomorphic response similar to that seen with psoriasis.[5] KP can be divided

into four categories depending on the mechanism of trauma:[6]

- True Koebnerisation – KP is reproducible in all patients following a variety of insults (except secondary to infectious or allergenic agents) and is often seen in patients with psoriasis, lichen planus and vitiligo.
- Pseudo-Koebnerisation – skin breakdown or the seeding of an infectious agent in the surrounding tissue induces KP. This is often seen in patients with verrucae, impetigo or molluscum contagiosum infection.
- Occasional KP – some criteria for KP are present, such as Darier's disease, erythema multiforme or lupus erythematosus.
- Trauma-induced processes – the lesions have a questionable connection to trauma, such as pemphigus vulgaris.

Answer 4

Koebner lesions are treated in the same way as the associated dermatosis, in this case psoriasis. Cosmetic surgery or therapeutic proceedings should, if possible, be made while the disease is quiescent.[1]

Key points

- KP is the development of isomorphic pathological lesions in the traumatised, uninvolved skin of patients who have active cutaneous diseases.
- KP is often associated with psoriasis, lichen planus and vitiligo.

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Competing interests: Tiago Torres has, outside this work, received payment for board membership, expert testimony, lectures and educational presentations, and expenses from Pfizer, Abbvie, Novartis, Janssen, MSD and Leo-Pharma; payment from Janssen for consultancy; and grants from MSD and Leo-Pharma.

Provenance and peer review: Not commissioned, externally peer reviewed.

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