Vitamin D in Keloids: An alternative to steroids?
Alizeh Naushad1, Nashit Irfan Aziz2

Madam, Keloids are wound healing scars with well-demarcated overgrowth of fibrotic tissue, mainly involving excessive collagen proliferation produced by fibroblasts. They extend beyond the original injury site, and are associated with pain and pruritus.1,2

Few treatments available for Keloids include occlusive dressings, compression therapy and intralesional corticosteroid injections.1 Triamcinolone acetate, a corticosteroid injection, is considered the first line treatment as it possesses anti-inflammatory and anti-mitotic activities, which reduce scar volume and prevent a recurrence. However, approximately 50% of keloids are considered to be steroid resistant.3,4 Moreover, as per literature, the usage of intralesional corticosteroid injections can cause several local and systemic adverse effects such as telangiectasias, skin necrosis, skin and subcutaneous fat atrophy, and Cushing’s syndrome.5

In light of the above, researchers are keen on finding other treatment modalities for treating these lesions, and among them Vitamin D, is being investigated. Vitamin D is a steroid hormone that normally plays a role in regulating serum calcium, inhibiting cellular proliferation and promoting cell differentiation and apoptotic activities. Transforming growth factor-beta (TGF-β), an inflammatory marker, has been implicated in the pathogenesis of keloids. TGF-β is believed to be inhibited with localised Vitamin D. Furthermore, Vitamin D deficiency plays a significant role in keloidogenesis, a process mediated by dysregulation of koebnerisin, an antimicrobial polypeptide.2

A study was conducted recently, where 40 adults, aged 18 to 60 years, were administered intralesional Vitamin D, on keloids sized atleast 5 cm, with sessions carried out every week for a maximum of 3-4 sessions. This study showed a highly significant reduction in the Vancouver Scar Scale, a scarring scoring system.1

However, further trials, specially comparative studies, are needed to effectively weigh in the efficacy of Vitamin D over steroids. Advantages of Vitamin D are evident and promising so far – it’s cost-friendly, and shows mild side effects such as burning, pain, swelling and tenderness that shortly disappear on its own.

Disclaimer: None.
Conflict of interest: None.
Funding disclosure: None.
DOI: https://doi.org/10.47391/JPMA.8429
Submission completion date: 11-12-2022
Acceptance date: 03-04-2023

References

Correspondence: Nashit Irfan Aziz.  e-mail: nashit.irfan24@gmail.com
ORCID ID: 0000-0003-0426-4866