Letters

Skin surveillance in patients with immunosuppression

We thank Mr Steven Ivulich and Professor Gregory Snell for their comprehensive article on the long-term management of elderly patients prescribed immunosuppressive agents (*AJGP* March 2020).[1] The authors approached the management of these often complex patients in a thorough and holistic manner. We write this letter to further address some of the outstanding issues related to cutaneous malignancy and its recommended management.

The authors highlight that malignancy, particularly of the non-melanomatous skin cancer type, is of significantly higher incidence in patients who are immunosuppressed. Incidence of squamous cell carcinoma is at least 65 times higher and incidence of basal cell carcinoma is 10 times higher in patients who have received an organ transplant.[2] The general proposed pathophysiological mechanism is the relative immunosenescence and reduced immune surveillance of malignancy due to the systemic immune suppression.

The article recommended annual dermatological examination in patients with immunosuppression and could have further considered the underlying conditions requiring immunosuppression or patients' past dermatological history, with particular importance given to past cutaneous malignancy. Australian guidelines for skin surveillance in transplant recipients since 2008 have recommended follow-up at transplant-dedicated specialist clinics if possible, often by a transplant-dedicated dermatology subspecialty clinic.[3] However, often as a result of patient geographical and time constraints, the general practitioner adopts the role.

Approaches to skin surveillance in patients with immunosuppression in a specialist transplant dermatology service aim to regularly review patients to assist early detection and treatment. Recommendations generally suggest three-month reviews for high-risk patients and those who have developed two or more skin cancers.[4,2] Some authors argue that patients without cancer recurrence for 12 months could be reviewed annually;[4] however, specialist transplant dermatology clinics often only delegate this to the patients at lowest risk and would review patients biannually.

The majority of research and recommendations available for skin surveillance in patients with immunosuppression originates from the transplant cohort, with other conditions having little evidence for ongoing management. Rates of cutaneous malignancy appear to be similar across different conditions in the limited available data;[5] therefore, specialist clinicians generally adopt similar principles for management for all patients with immunosuppression.

Nicholas Van Rooij
Dermatology Resident,
The Royal Brisbane and Women's Hospital, Qld

Sarath Bodapati
Dermatology Registrar,
The Royal Brisbane and Women's Hospital, Qld

Ivan Robertson
Dermatologist,
Director of Dermatology,
The Royal Brisbane and Women's Hospital, Qld

References

1. Ivulich S, Snell G. Long-term management of elderly patients taking immunosuppressive medications. Aust J Gen Pract 2020;49(3):100–06. doi: 10.31128/AJGP-10-19-5137.
2. O'Reilly Zwald F, Brown M. Skin cancer in solid organ transplant recipients: Advances in therapy and management: Part I. Epidemiology of skin cancer in solid organ transplant recipients. J Am Acad Dermatol 2011;65(2):253–61. doi: 10.1016/j.jaad.2010.11.062.
3. Cancer Council Australia Keratinocyte Cancers Guideline Working Party. Clinical practice guidelines for keratinocyte cancer. Sydney: Cancer Council Australia, 2019. Available at https://wiki.cancer.org.au/australia/Guidelines:Keratinocyte_carcinoma [Accessed 11 May 2020].
4. Harwood CA, Mesher D, McGregor JM, et al. A surveillance model for skin cancer in organ transplant recipients: A 22-year prospective study in an ethnically diverse population. Am J Transplant 2013;13(1):119–29. doi: 10.1111/j.1600-6143.2012.04292.x.
5. Gonzalez JL, Reddy ND, Cunningham K, Silverman R, Madan E, Nguyen BM. Multiple cutaneous squamous cell carcinoma in immunosuppressed vs immunocompetent patients. JAMA Dermatol 2019;155(5):625–27. doi: 10.1001/jamadermatol.2018.5595.

Reply

We thank you for your response. The aim of the article was to provide a screening tool and guidance for general practitioners (GPs) managing the challenges associated with long-term immunosuppression in elderly patients. The monitoring and management of skin cancers in patients prescribed immunosuppressant medication is a diverse topic requiring a more comprehensive overview that is beyond the scope of our article.

With regards to the frequency of monitoring of potential malignant lesions, we agree that high-risk patients would require more frequent monitoring determined by the GP according to the degree of individual risk. Useful local resources, such as those from Cancer Council Australia or published international consensus guidelines, can assist with specific recommendations for screening. Risk factors that need to be considered for the frequency of screening include the dose and duration of immunosuppression, previous sun exposure, skin phototype, smoking history, history of skin cancer and the concurrent

use of voriconazole.[1,2] The incidence of skin malignancy will vary, with the highest rates among patients with heart and lung transplants, whereas the degree of risk with newer biological agents has not been determined.[3,4]

We note that many GPs may have the skills and equipment to detect, diagnose and remove many suspicious early lesions. GPs are ideally placed to assess the individual risk, provide education on skin self-examination, surgically intervene according to their skill level or refer as appropriate. Many tertiary centres have a dedicated dermatology subspecialty clinic, and early referral may be required for any suspicious, complex, large lesions. The coordination of serial photographs through medical photography or potentially remote viewing using telehealth can assist with the identification and diagnosis of malignancies. Modification of immunosuppressant regimens may be required to minimise growth of skin malignancies, and liaising with specialist teams is important for guidance on potential modification of immunosuppressant regimens.

Ongoing optimal management of patients with skin malignancies requires close collaboration between GPs, dermatologists and the specialist team prescribing immunosuppression. Specialist backup is necessary to support GPs to access timely and appropriate services for patients.

Steven Ivulich
Lead Pharmacist,
CardioRespiratory Services,
Alfred Hospital, Vic

Gregory Snell
Head – Lung Transplant Service,
Alfred Hospital, Vic

References

1. Sahebian A, Pandeya N, Chambers DC, Soyer HP, Green AC. High prevalence of skin cancers and actinic keratoses in lung transplant recipients. J Heart Lung Transplant 2018;37(3):420–22. doi: 10.1016/j.healun.2017.11.016.
2. Tang H, Shi W, Song Y, Han J. Voriconazole exposure and risk of cutaneous squamous cell carcinoma among lung or hematopoietic cell transplant patients: A systematic review and meta-analysis. J Am Acad Dermatol 2019;80(2):500–07.e10. doi: 10.1016/j.jaad.2018.08.010.
3. Krynitz B, Edgren G, Lindelöf, B, et al. Risk of skin cancer and other malignancies in kidney, liver, heart and lung transplant recipients 1970 to 2008 – A Swedish population-based study. Int J Cancer 2013;132(6):1429–38. doi: 10.1002/ijc.27765.
4. Scott FI, Mamtani R, Brensinger CM, et al. Risk of nonmelanoma skin cancer associated with the use of immunosuppressant and biologic agents in patients with a history of autoimmune disease and nonmelanoma skin cancer. JAMA Dermatology 2016;152(2):164–72. doi: 10.1001/jamadermatol.2015.3029.

correspondence **ajgp@racgp.org.au**