Psoriasis: not just skin deep. An audit of cardiovascular risk assessment in patients with psoriasis, using a validated risk tool.

GP Specialist Training Programme – Dublin NorthEast

Dr. Ruth Caden ,Dr. Deirdre Smyth-Moran , Dr. Larry Moran.
The Diamond Family Practice, Clones, Co. Monaghan.

Introduction

Psoriasis is a common and severe disease, impairing patients' quality of life to the extent similar to other major diseases such as cancer or diabetes. Life expectancy is reduced by approximately four years in patients with severe psoriasis, primarily owing to their increased cardiovascular risk[1]. It is frequently encountered in general practice. Extrapolating from UK fugures[3] it is estimated that the prevalence in Ireland is 1.6%[3] (approx. 73,OOO people). It affects males and females equally.

Psoriasis has been independently linked with cardiovascular events such as stroke and MI[3,4,5,6.]

General Practitioners are uniquely placed to assess and monitor the cardiovascular risk for psoriasis patients along with other co-morbidities of this chronic disease. NICE guidelines state that cardiovascular risk should be assessed for all patients with psoriasis (of any severity) at presentation and that a validated risk assessment too should be used[2]. In addition, the guideline states that patients should be classified as mild, moderate or severe as this confers a substantially increased risk of CVD.

Using NICE clinical audit tool: Psoriasis for non-specialists 2013 [8], an audit was conducted of current patients with psoriasis and assessed the proportion of those who had appropriate assessment of cardiovascular risk. The disease severity and cardiovascular risk of psoriasis patients attending between January 2016 and May 2016 was then prospectively assessed using The Framingham Cardiovascular Risk Score as the validated tool.

Method

A register of psoriasis patients was obtained from our Health One database using disease codes and searches for drugs commonly used in psoriasis. Psoriasis is coded on our system to ICD-10/ ICPC automatically when it is inserted into the problem list. 73 patients were identified. Our practice has 2196 GMS patients with approximately 1500 regularly attending private patients giving a total prevalence for psoriasis of 1.9%, or slightly higher than the estimated national prevalence. This was a straightforward undertaking.

A retrospective analysis of the case notes was then conducted and the following data was gathered as per NICE guidelines referenced above; (1) Did the patient have severe psoriasis and was that documented? (2) Were they assessed for cardiovascular risk at presentation? (3) Was a validated estimation tool used for this assessment? (4) Have they had their cardiovascular risk assessed at least every five years?

All patients with psoriasis who attended between January 2016 and May 2016 were to have an opportunistic cardiovascular assessment carried out. A practice meeting was arranged to discuss the audit and address any questions or concerns from staff. The severity scoring system and cardiovascular risk assessment was explained. It was important that we had good participation from nurses and doctors to ensure that we adequately recorded data on all patients presenting during the study period. In order to facilitate this, some staff members who were less familiar with the IT system were given hard copies of the assessment tool. 3 doctors and one nurse took part in the study. Administrative staff were instrumental in the data-gathering phase, and in setting up a dedicated 'medi-form' for the assessment of cardiovascular risk in psoriasis patients

A prompt was inserted in Health One to alert health professionals to conduct assessment. This was in the form of an alert that was activated when the case notes of patient from our psoriasis register were accessed. The alert prompted the health professional to conduct a cardiovascular assessment using the Framingham medi- form, record disease severity and discuss the risk with patients.

Method

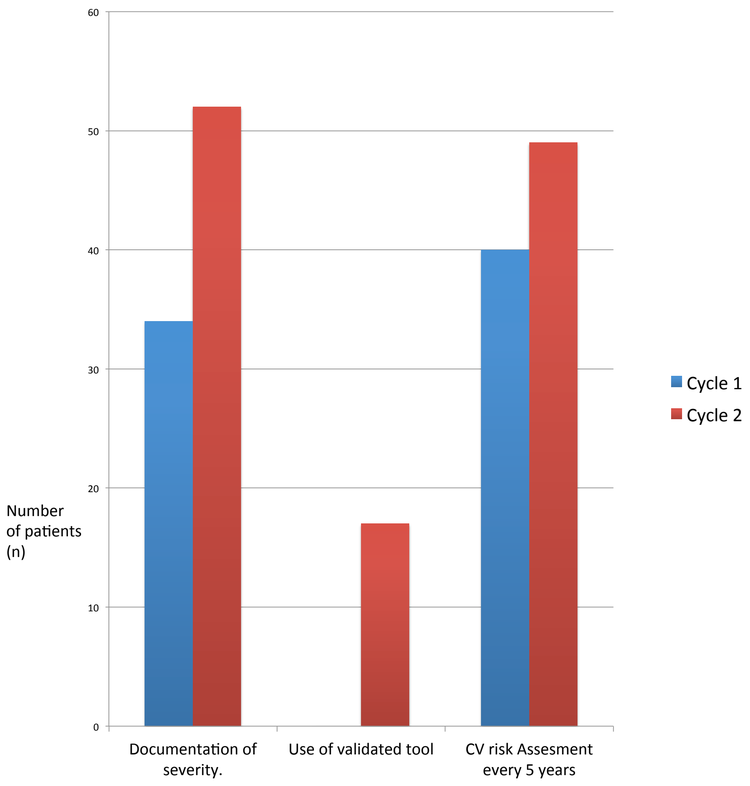
A literature review was conducted on PubMed in order to select an appropriate tool. Based on the evidence. The Framingham score was selected because of its usefulness in the assessment of CVD risk in patients with psoriasis[7] . This was not a head to head study with any other risk tool e.g. Qrisk . NICE does not specify which tool should be used. Severe psoriasis was defined as affecting >10% of body area and/or need for inpatient, systemic or UV light therapy. Moderate psoriasis is defined as affecting 3-10% of body area and mild affects <3% body surface area. A re-audit into assessment of cardiovascular risk in our psoriatic patients was then carried out.

Results

73 (23 male, 50 female) patients with psoriasis were identified in the 1st phase during data collection. 47%(n=34) had the severity of their psoriasis recorded in the notes. 5.4% (n=4) were assessed for their cardiovascular risk using any measure at presentation. 56%(n=40) had their cardiovascular risk assessed with ECG, BP, Lipid profile, BMI, glucose/Hba1c or a combination of these in the 5 years preceding January 2016.

None were assessed at any stage using a validated risk tool.

The following are the results of the re-audit post change implementation. The number of patients on the psoriasis register increased to 80(2 new cases and 5 not previously coded). All new patients (n=2) underwent appropriate cardiovascular risk assessment. The number of those patients for whom severity of disease was recorded increased from increased from 47%(n=34) to 61%(n=45). When taking into account new patients registered during the study period, severity was recorded in 65% (n=52) of psoriasis patients on the register. The number of patients who had any form of cardiovascular assessment grew from 56%(n=40) to 67%(n=49). 21%(n=17) had their risk assessed using a validated tool (Framingham).
5 of those who were assessed in cycle 2 using the Framingham score had a score of >10% conferring an intermediate risk of cardiovascular disease in the next 10 years. 2 patients in this cohort had had a risk >20%. Of this cohort, 1 of these patients had not had a cardiovascular assessment previously.

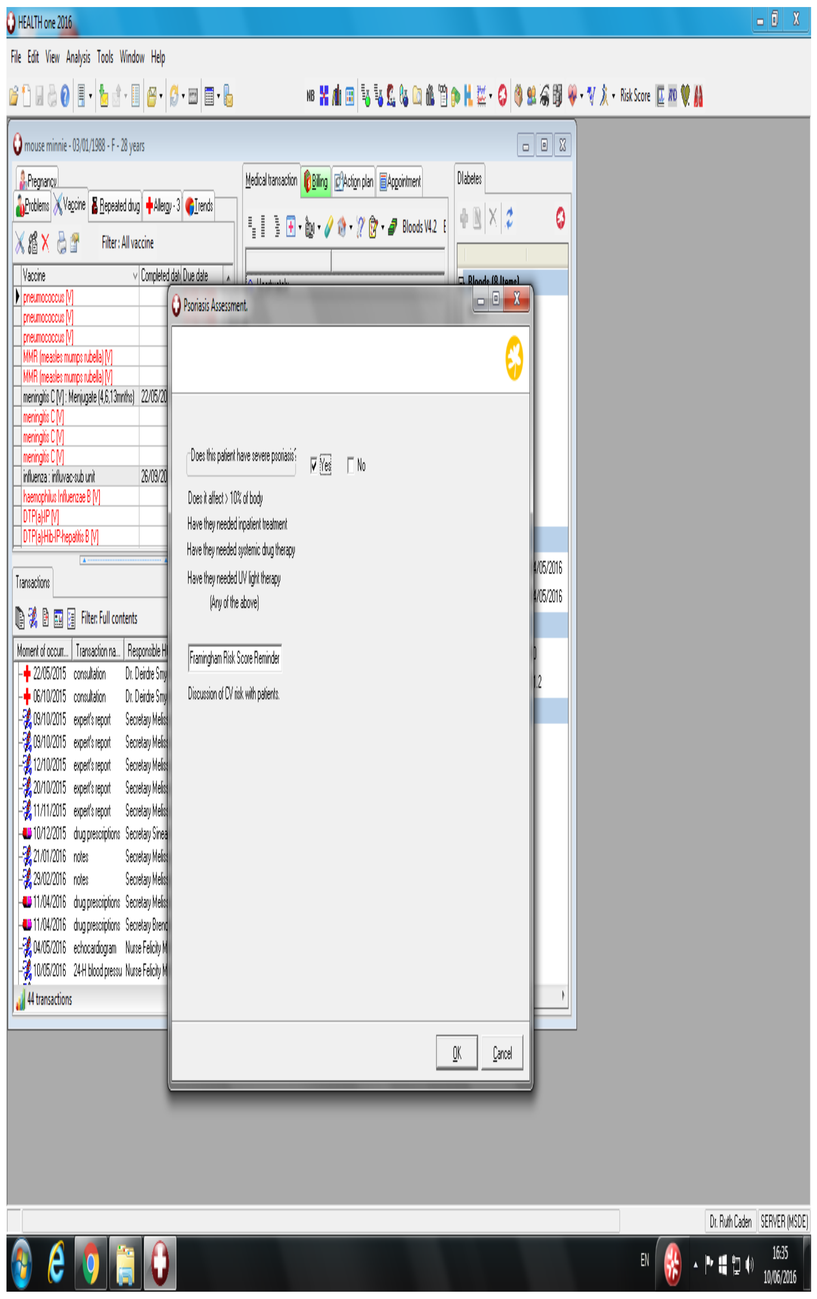


Discussion

Given our patient numbers, our prevalence of 1.9% is largely in line with the 1.6% prevalence suggested by The Irish Skin Foundation[3] (which is extrapolated from UK figures). This suggests good recording and/or recognition of this condition in our practice. Overall, there was good participation levels among the staff. Some staff were concerned that the audit may lead to extra work in the future. There was a concern that analysing cardiovascular risk in psoriasis patients was not a priority given already limited resources and increasing demand. However at the practice meeting it was explained that psoriasis is being increasingly recognised as a systemic illness, conferring in particular, an increased cardiovascular risk. General Practitioners have a key role to play in the assesment and management of this risk. Providing staff members with a hard copy of the assessment tool worked well in term of optimal data collection but was somewhat cumbersome when analysing the data.

Recommendations

As a result of this audit we recommend that assesment of cardiovascular risk in patients with psoriasis be done using a validated risk tool, at least every five years and for the risk to be managed accordingly. We plan to implement this as practice policy over time. We also plan to assess the outcome measures of this intervention and would hope to see reduced morbidity and mortality in our psoriasis cohort resulting from timely assessment and risk management. We have created a medi-form on Health One which we hope will facilitate the ease and efficiency with which staff are able to perfom this assessment (See below). We would also hope that in the future General Practice is resourced to manage psoriasis as a chronic systemic disease.



Contact

Ruth Caden
GP Registrar, Dublin North East
Email: ruthcaden@rcsi.ie

References

1. Boehnke, W., Boehnke, S. and Schon, M. (2010) 'Managing comorbid disease in patients with psoriasis' , BMJ (*Clinical researched.)., 340*
2. . 2016, N. (2016) *Psoriasis - NICE pathways*. Available at: http://pathways.nice.org.uk/pathways/psoriasis.
3. Burden of psoriasis: Report exposes the hidden burden of misunderstood skin disease (2015) Available at: http://irishskinfoundation.ie/news/detail/burden-of-psoriasisreport-exposes-the-hidden-burden-of-misunderstood-skin-disease.
4. Gelfand, J., Dommasch, E., Shin, D., Azfar, R., Kurd, S., Wang, X. and Troxel, A. (2009) 'The risk of stroke in patients with psoriasis', *The Journal of investigative dermatology.*, 129(10), pp. 2411–8.
5. Gelfand, J., Neimann, A., Shin, D., Wang, X., Margolis, D. and Troxel, A. (2006) 'Risk of myocardial infarction in patients with psoriasis', *JAMA.*, 296(14), pp. 1735–41.
6. Mehta, N.N., Yu, Y., Haynes, K., Love, T.J., Maliha, S., Ogdie, A., Troxel, A.B., Hennessy, S., Kimmel, S.E., Margolis, D.J., Choi, H., Jiang, Y., Gelfand, J.M., 2, B., Hospital, W., Boston, Medicine, P., Medical, H., York, N. 6, Rheumatology, D. of 7, Unit, the C.E., Diseases, C., Heart, N. and Institute, B. (2014) 'Risk of major cardiovascular events in patients with psoriatic arthritis, psoriasis and rheumatoid arthritis: A population-based cohort study', *Annals of the Rheumatic Diseases*, , pp. 2014–205675. doi: 10.1136/annrheumdis-2014-205675
7. Gisondi, P., Farina, S., Giordano, M. and Girolomoni, G. (2010) 'Usefulness of the framingham risk score in patients with chronic psoriasis', *The American journal of cardiology.*, 106(12), pp. 1754–7.
8. NICE (2012) *Psoriasis: Assessment and management*. Available at: https://www.nice.org.uk/guidance/cg153/resources).