

Decline in Pigmented Lesion Referrals and Melanoma Diagnoses During COVID-19 Lockdown

H.B. Sazali¹, L. Roche¹, A. Alsharqi¹, B. Kirby¹, B. Moriarty¹, A. Lally^{1, 2}

1. Department of Dermatology, St. Vincent's University Hospital (SVUH), Dublin, Ireland.
2. Chair St. Vincent's Hospital Group Strategic Skin Cancer Network.

Abstract

Aims

To assess the impact of COVID-19 lockdown on pigmented lesion referrals and melanoma diagnoses in our institution.

Methods

Data on NCCP pigmented lesion e-referrals and melanoma diagnoses in a single dermatology centre in 2020 were compared with 2019.

Results

E-referrals received were lowest in April 2020 (17 compared with 76 in April 2019). Melanoma diagnoses in Q2 2020 (n=15) were two-thirds lower than in Q2 2019 (n=45). Clinical stage 1 melanomas diagnosed in 2020 (n=44) were 41% lower than in 2019 (n=74). Clinical stage 2 melanomas increased from 3 in Q2 2020 to 16 in Q3 2020, which is double the number in Q3 2019 (n=8). Total number of cutaneous melanoma diagnoses were 18% lower in 2020 compared with 2019.

Discussion

Pigmented lesion referrals and melanoma diagnoses significantly reduced during lockdown with a trend for increased clinical stage 2 melanomas in later months of 2020. It will be several months before the true impact of COVID-19 on melanoma diagnoses is known.

Introduction

In 2014, Ireland's National Cancer Control Programme (NCCP) introduced an e-referral form for general practitioners (GPs) to refer suspicious pigmented lesions to dermatology and plastic surgery departments¹. Uptake of this form is not universal amongst GPs, accounting for less than half of all referrals relating to suspicious pigmented lesions received in our institution. Reliable referral data is only recorded for referrals received electronically and numbers of NCCP pigmented lesion e-referrals have been increasing in our unit, with mean monthly e-referrals rising from 53 in 2018 to 73 in 2019.

Across specialties, cancer referrals reduced in the initial stages of COVID-19 pandemic, with reduced urgent skin cancer referrals and skin cancer diagnoses recorded in the United Kingdom². This raises concerns regarding diagnostic delay and potentially poorer prognosis at the time of diagnosis^{3,4}. We reviewed NCCP pigmented lesion e-referrals and melanoma diagnoses in our institution to assess the impact of COVID-19 restrictions.

Methods

This was a retrospective review of NCCP pigmented lesion e-referrals and melanoma diagnoses in our institution in 2020, compared with 2019. Data on Breslow thickness and clinical staging of melanomas diagnosed in 2020 were compared with 2019.

Results

The number of NCCP pigmented lesion e-referrals received decreased in March 2020 (containment phase of COVID-19 pandemic, when initial lockdown commenced in Ireland); n=30 compared with n=68 in March 2019. A further reduction in e-referrals was observed in April 2020 (mitigation phase); n=17 compared with n=76 in April 2019 (Figure 1). We identified that the period with lowest e-referrals (March–April 2020) coincided with a peak of 14-day incidence rate of COVID-19 at the beginning of the pandemic⁵. Referrals increased sharply as restrictions were lifted with numbers in July 2020 (n=105) surpassing referrals in July 2019 (n=85). The number of e-referrals per month in fourth quarter of 2020 are higher than corresponding months in 2019 despite the tightened movement restrictions imposed in October 2020.

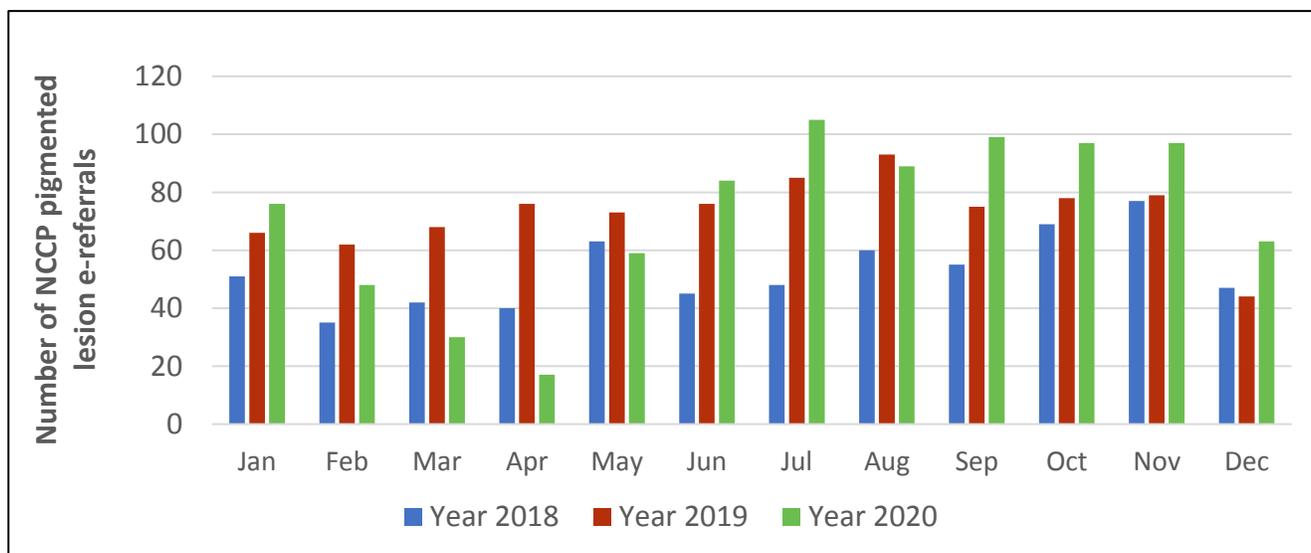


Figure 1: NCCP Pigmented Lesion GP e-referrals to SVUH from January to December in 2018-2020.

The number of new melanoma diagnoses in second quarter of 2020 (n=15) was two-thirds lower than same period in 2019 (n=45), reflecting the decline in NCCP pigmented lesion e-referrals during initial lockdown and patient reluctance to attend both GP and hospital appointments. The number of melanoma diagnoses increased from third quarter of 2020 (n=41) to fourth quarter of 2020 (n= 49), comparable with melanoma diagnoses in fourth quarter in 2019 (n=50). The total number of primary cutaneous melanomas diagnosed in 2020 was 18% lower than in 2019.

Given the small numbers of patients, it is difficult to look at differences in Breslow thickness over the review period. The monthly mean Breslow thickness from 2019 to date was highest in April 2020 (3.6 mm), despite having the lowest e-referrals. This possibly reflects that only those with highly concerning skin lesions were happy to attend medical appointments during the early stage of the Covid pandemic. The median Breslow thickness were 1.3mm (range 0.4 -8mm) in first quarter of 2020, 1.7mm (range 0.4 -8mm) in second quarter 2020, 2.6mm (range 0.3 -9.5mm) in third quarter of 2020 and 0.95mm (range 0.1 -15mm) in fourth quarter of 2020.

The number of clinical stage 1 melanoma diagnoses reduced from first to second quarter of 2020 then increased from third to fourth quarter of 2020 (n=13 in January–March, n=5 in April–June, n=8 in July–September, and n=18 in October–December 2020); these figures are lower compared with corresponding periods in 2019 (n=22 in January–March, n=14 in April–June and n=15 in July–September, and n=23 in October–December 2019). The total number of stage 1 melanomas in 2020 (n=44) have reduced by 41% compared with 2019 (n=74).

The number of clinical stage 2 melanoma diagnoses reduced from first to second quarter of 2020 (n=9 in January–March, n=3 in April–June 2020). This markedly increased in third quarter of 2020 (n=16 in July–September 2020); although the overall numbers are low, this is twice the number of stage 2 melanomas diagnosed at presentation in same period of 2019 (n= 8). However, the total number of stage 2 melanomas in 2020 (n=34) were similar to 2019 (n=36).

Discussion

Almost 1200 cases of invasive melanoma are diagnosed annually in Ireland⁶, with 186 cases of primary melanoma diagnosed in our institution in 2019. Breslow thickness is the most important histopathological feature when assessing melanoma staging and prognosis. We identified a reduction in NCCP pigmented lesion e-referrals and new melanoma diagnoses in our institution during the initial COVID-19 lockdown, reflecting the decline in pigmented lesion e-referrals reported nationally in the same period⁷. The numbers we report are low, but it is concerning that there is a trend towards greater proportion of melanomas in the stage 2 category at diagnosis in third quarter of 2020 compared with corresponding period in 2019. Hybrid melanoma multidisciplinary team (MDT) meetings have been held in our hospital since March 2020 to ensure continued MDT input for management for melanoma patients. The potential impact of COVID-19 on delayed presentation of melanoma and other skin cancers will not be clear for some time. We would like to highlight the importance of patients presenting with skin lesions they are concerned about so that appropriate care is not delayed.

Acknowledgement:

We would like to thank Nicola Moran, data manager, St Vincent's University Hospital and Eileen Nolan, National Cancer Control Programme for their assistance providing data.

Declaration of Conflicts of Interest:

None declared.

Corresponding Author:

Dr Hafsah Sazali
Department of Dermatology,
St Vincent's University Hospital,
Dublin 4,
Ireland.
E-mail: hafsahsazali@svhg.ie

References:

1. Nolan E, Codd R, Laffoy M, Doogue O, O'Mahony B, Jordan V. Development of National Electronic Cancer Referral in Ireland: a solution for a safer referral patient pathway. Poster presented at the 4th National Patient Safety Conference 7th November, Croke Park Conference Centre. Dublin: NCCP, 2014. Available from: <https://hse.drsteevenslibrary.ie/cancercare/publications> [accessed 8th November 2020].
2. Earnshaw C, Hunter H, McMullen E, Griffiths C, Warren R. Reduction in skin cancer diagnosis, and overall cancer referrals, during the COVID-19 pandemic. *Br J Dermatol*. 2020;183: 792-794. doi:10.1111/bjd.19267
3. Ricci F, Fania L, Paradisi A, Di Lella G, Pallotta S, Sobrino L, et al. Delayed melanoma diagnosis in the COVID-19 era: increased breslow thickness in primary melanomas seen after the COVID-19 lockdown. *J Eur Acad Dermatol Venereol* 2020. doi:10.1111/jdv.16874
4. Tejera-Vaquerizo A and Nagore E. Estimated effect of COVID-19 lockdown on melanoma thickness and prognosis: a rate of growth model. *J Eur Acad Dermatol Venereol* 2020; 34: e351-e353. doi:10.1111/jdv.16555
5. Health Protection Surveillance Centre. Epidemiology of COVID-19 in Ireland: prepared by HPSC on 01/09/20 for National Public Health Emergency Team. HPSC, Dublin, Ireland. Available from: <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/casesinireland/epidemiologyofcovid-19inireland/september2020/> [accessed 8th November 2020].
6. National Cancer Registry Ireland. Cancer in Ireland 1994-2017 with estimates for 2017-2019: Annual report of the National Cancer Registry. NCRI, Cork, Ireland. Available from: <https://www.ncri.ie/publications/statistical-reports/cancer-ireland-1994-2017-estimates-2017-2019-annual-report-national> [accessed 8th November 2020].
7. Murray G, Roche D, Ridge A, Hackett C and Tobin A. Response to 'Reduction in skin cancer diagnosis, and overall cancer referrals, during the COVID-19 pandemic'. *Br J Dermatol*, 184: 580-581. doi:10.1111/bjd.19667