



ELSEVIER

Contents lists available at ScienceDirect

JPRAS Open

journal homepage: www.elsevier.com/locate/jpra

Non-melanoma skin cancer activity during the COVID-19 pandemic- A single UK tertiary centre experience

O. Abbassi*, S. Waseem, S. Murphy, J. Roszpopa, M. Nizamoglu, A.J.K. Patel, A.J. Durrani

Addenbrooke's Hospital, Hills Road, Cambridge CB20QQ, United Kingdom

ARTICLE INFO

Article history:

Received 23 October 2020

Accepted 1 April 2021

Keywords:

COVID-19

Non-Melanoma Skin Cancer

BCC

SCC

Excision

Histology

ABSTRACT

The pandemic caused by SARS-CoV-2 virus, also known as COVID-19, has generated shockwaves in medical and surgical practice. It has necessitated re-deployment of staff and resources to cater for the unpredictable increase in footfall and demand on healthcare systems. This study aimed to investigate how the restructuring of our service altered the triage and management of non-melanoma skin cancer (NMSC) during the pandemic's first wave rise and peak.

We retrospectively analysed all patients who underwent a skin excision under local anaesthetic which revealed the presence of a basal cell carcinoma (BCC) or squamous cell carcinoma (SCC) on histopathological analysis between 1st February 2020 – 31st May 2020 compared with the same period in 2019.

There was a 158% increase in patients with excision of lesions confirmed on histopathological analysis as a NMSC during the COVID-19 period (168 vs. 65). In 2020, more excisions were performed by consultants (42.9% v 21.5%, $p = 0.002$) with a lower proportion of excisions with a close margin (27.7% v 17.8%, $p = 0.096$) and an involved margin (3.1% v 1.8%, $p = 0.62$). Five of these patients had their further management altered due to service constraints at this time.

The resource constraints secondary to the pandemic have yielded beneficial service adaptations with the incorporation of a more efficient model for the NMSC service. The sustainability of

* Correspondence to: Flat 19 15 Hoxton Sq. London N1 6NT, United Kingdom.

E-mail address: oabbassi@doctors.net.uk (O. Abbassi).

this model and its impact on training will require further examination when non-urgent and benign elective workload is slowly reinstated and plastic surgery trainees return to their original posts.

© 2021 Published by Elsevier Ltd on behalf of British Association of Plastic, Reconstructive and Aesthetic Surgeons.

This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

Introduction

The pandemic caused by SARS-CoV-2 virus, also known as COVID-19, has generated shockwaves in medical and surgical practice.¹ It has necessitated re-deployment of staff and resources to cater for the unpredictable increase in footfall and demand on healthcare systems. In our tertiary centre, this included re-deployment of plastic surgery trainees to medical wards with the non-melanoma skin cancer (NMSC) service staffed predominantly by consultants. This study aimed to investigate how the restructuring of our service altered the triage and management of NMSC during the pandemic's first wave rise and peak.

Methods

We retrospectively analysed all patients who underwent a skin excision under local anaesthetic which revealed the presence of a basal cell carcinoma (BCC) or squamous cell carcinoma (SCC) on histopathological analysis. We compared all patients treated between 1st February 2020 – 31st May 2020 with the same period in 2019. Data was collected on demographics, diagnosis, deep and peripheral margins and incomplete excisions. In addition, data was recorded on altered management decisions secondary to restrictions related to the pandemic.

Results

There was a 158% increase in patients with excision of lesions confirmed on histopathological analysis as a NMSC during the COVID-19 period (168 v 65). A breakdown is summarised in [Table 1](#). The mean peripheral margin of BCC excision was 3.85 mm, with an average peripheral margin of 4.94 mm for SCCs. In 2020, more excisions were performed by consultants (42.9% v 21.5%, $p=0.002$). There was a lower proportion of excisions with a close margin in 2020 (27.7% v 17.8%, $p=0.096$) and an involved margin (3.1% v 1.8%, $p=0.62$). Five of these patients had their further management altered due to service constraints at this time, entailing conservative management via surveillance as opposed to adjuvant treatment or re-excision.

Table 1
NMSC activity comparative table.

	2019 (Feb-May)	2020 (Feb-May)
Total number of NMSC lesions	65	168
N BCCs (%)	41 (63%)	89 (53%)
N SCCs (%)	24 (37%)	79 (47%)
N Consultant performing (%)	14 (21.5%)	72 (42.9%)
N ST3+ performing (%)	50 (76.9%)	83 (49.4%)
N SHO performing (%)	1 (1.5%)	13 (7.7%)
N close margin (%)	18 (27.7%)	30 (17.8%)
N involved margin (%)	2 (3.1%)	3 (1.8%)

Discussion

There was an increase in the amount of NMSC excisions undertaken during the COVID-19 pandemic. This may be explained by the consultant led triage and reprioritisation of referrals for local anaesthetic excision, prioritising patients with a high clinical probability of NMSC and balancing the risk of potential COVID-19 infection during their hospital attendance.² At our trust we have undertaken an increased number of telemedicine patient reviews, utilising photographs and images of skin lesions in order to assess the need and priority for excision. SCCs were prioritised over BCCs regardless of respective lesion risk which is reflected in the findings.

In order to understand the increase in number of excisions undertaken in 2020 we need to examine capacity and flow. The main impact on surgical practice from the initial response to the pandemic involved deferring and/or cancelling non-urgent and non-cancer elective surgery to deal with the anticipated surge of suspected and confirmed COVID-19 cases presenting for assessment and management. Although this had a negative impact upon majority of non-urgent and benign elective workload it did mean that capacity for cancer surgery increased. A significantly higher number of operations were undertaken by consultant plastic surgeons which is likely to have improved patient flow with decreased operative times. However, flow of patients within the hospital was curtailed due to increased turnaround time between cases, heightened infection control measures including donning, doffing and use of enhanced personal protective equipment (PPE).

Consultant led performance of NMSC excisions under local anaesthetic reduced the rate of close or incomplete excisions, but this did not reach statistical significance. Previous studies from our trust have displayed a higher rate of close or incomplete excisions in poorly differentiated SCCs,³ with a significantly higher rate of incomplete excision when a trainee has performed the procedure.⁴ Our study shows an overall lower rate of incomplete excisions during the COVID-19 pandemic when compared with previous literature.

The resource constraints secondary to the pandemic have yielded beneficial service adaptations with the incorporation of a more efficient model for the NMSC service. The consultant led triage and excision framework manifested a higher rate of excisions positive for NMSC with a low rate of close and incomplete excisions. The sustainability of this model and its impact on training will require further examination when non-urgent and benign elective workload is slowly reinstated and plastic surgery trainees return to their original posts.

Ethical approval

Not required

Declaration of Competing Interest

None declared.

Funding

None.

References

1. Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y, et al. Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. *N Engl J Med*. 2020;382(13):1199–1207.
2. British Association of Dermatologists. Clinical guidance for the management of skin cancer patients during the coronavirus pandemic. 2020.
3. Kiely J, Kostusiak M, Bloom O, Roshan A. Poorly differentiated cutaneous squamous cell carcinomas have high incomplete excision rates with UK minimum recommended pre-determined surgical margins. *J Plast Reconstr Aesthet Surg*. 2020;73(1):43–52.
4. Wong KY, Gilleard O, Price RD. Are non-melanoma skin cancer incomplete excision rates different between grades of plastic surgeons? *J Plast Reconstr Aesthet Surg*. 2013;66(5):e146–e148.