Abstract

A 9-Year Teledermoscopy Service: Retrospective Service Review

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Abstract

Background: A teledermoscopy service was established in January 2010, where patients attended nurse-led clinics for imaging of lesions of concern and remote diagnosis by a dermatologist.

Objective: The study aimed to review the number of visits, patient characteristics, the efficiency of the service, and the diagnoses made.

Methods: We evaluated the waiting time and diagnosis of skin lesions for all patient visits from January 1, 2010, to May 31, 2019. The relationships between patient characteristics and the diagnosis of melanoma were specifically analyzed.

Results: The teledermoscopy clinic was attended by 6479 patients for 11,005 skin lesions on 8805 occasions. Statistically significant risk factors for the diagnosis of melanoma/melanoma in situ were male sex, European ethnicity, and Fitzpatrick skin type 2. Attendance was maximal during 2015 and 2016. The seasonal variation in visits 2011-2018 revealed a consistent peak at the end of summer and a dip at the end of winter. In the year 2010, 306 patients attended; 76% (233/306) of these were discharged to primary care and 24% (73/306) were referred to hospital for specialist assessment. For patients diagnosed by the dermatologist with suspected melanoma from January 1, 2010, to May 31, 2019, the median waiting time for an imaging appointment was 44.5 days (average 57.9 days, range 8-218 days). The most common lesions diagnosed were benign naevus (2933/11,005, 27%), benign keratosis (2576/11,005, 23%), and keratinocytic cancer (1707/11,005, 15%); melanoma was suspected in 5% (507/11,005) of referred lesions (Multimedia Appendix 1). The positive predictive value of melanoma/melanoma in situ was 61.1% (320 true positives and 203 false positives). The number needed to treat (ie, the ratio of the total number of excisions to the number with a histological diagnosis of melanoma/melanoma in situ) was 2.02.

Conclusions: Diagnoses were comparable to the experience of other teledermoscopy services. Teledermoscopy using a nurse-led imaging clinic can provide efficient and convenient access to dermatology by streamlining referrals to secondary care and prioritizing patients with skin cancer for treatment.

Conflicts of Interest: None declared.

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KEYWORDS

dermatology; dermoscopy; telemedicine; skin neoplasm; melanoma

Multimedia Appendix 1

Diagnosis in patients who attended the teledermoscopy clinic from January 2010-May 2019 (n=11,005).
[PDF File (Adobe PDF File), 75 KB-Multimedia Appendix 1]

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