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Bare necessities? The utility of full skin examination in the COVID19 era

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Learning Points

- Full skin examination (FSE) may help in the early detection of malignant melanoma (MM).
- However FSE may not reduce mortality, and has economic and time limitations.
- The COVID19 pandemic has increased pressure on dermatology resources, and patient exposure to unnecessary healthcare interventions should be minimised.

- This study suggests that in low-risk patients attending a pigmented lesion clinic referred with a lesion of concern, the possibility of missing incidental cutaneous malignancies using targeted lesion examination (TLE) is low.
- While FSE is superior to TLE if resources are unlimited, FSE has minimal benefit in detecting additional skin cancers, and TLE permits more patients to be seen in our restricted face to face clinic appointments.
- TLE should be adopted as the standard of care in PLC to optimise efficiency in the COVID19 era.

Abstract

Full skin examination (FSE) may improve the detection of malignant melanoma (MM). The objective of this study was to assess the safety of targeted lesion examination (TLE) compared to FSE in our pigmented lesion clinic (PLC).

Patients attending PLC were randomised in a 2:1 ratio to FSE (intervention) or TLE (standard care). Demographic details and risk factors were documented. FSE and TLE were timed.

Of 763 participants, 520 were assigned to FSE and 243 were assigned to TLE. On average, FSE took 4.02 minutes and TLE took 30 seconds. Thirty-seven (7.1%) patients had incidental findings on FSE. Twelve patients (2.3%) had additional lesions biopsied. No additional melanomas were detected that would have been missed by use of the standard protocol.

This study suggests that in low-risk patients attending a PLC referred with a lesion of concern, the possibility of missing incidental cutaneous malignancies using lesion-directed examination is low.

Introduction

Full skin examination (FSE) may help in the early detection of malignant melanoma (MM). [1] However, the US Preventative Services Task Force does not recommend routine FSE, citing a lack of evidence for its efficacy in reducing mortality. [2] Hartman et al recently highlighted the economic and time limitations in routinely performing FSE. [3] The monumental impact of the COVID19 pandemic has increased pressure on dermatology resources, and patient exposure to unnecessary healthcare interventions should be minimised. [4]

The Pigmented Lesion Clinic (PLC) at our centre accepts referrals from general practitioners (GP) for patients with a suspicious pigmented lesion(s). The lesion(s) in question is examined by a consultant dermatologist. Any other lesion of concern to the patient are also examined. Full skin examination is performed only in patients with a prior personal or family history of melanoma and in male patients over the age of 50, as these patients are considered to be at higher risk of MM. Patients who have a suspicious lesion biopsied also have a FSE.

The aim of this study was to assess the safety of targeted lesion examination (TLE) compared to FSE, and to determine the types of lesions that were likely to be missed if only TLE, and not FSE, was performed.

Report

Ethical approval was provided by the Clinical Research and Ethics Committee of the Cork Teaching Hospitals. Patients attending 34 PLCs over a 20-month period were invited to participate in the study. Patients were randomised to either FSE (intervention group) or TLE (standard of care) in a 2:1 ratio. Male patients over 50 and patients with a personal or family history of MM were assigned to FSE as per departmental protocol. Those selected to undergo FSE had the additional examination performed by a senior dermatology specialist registrar, following their standard assessment (TLE) by a consultant dermatologist. Those randomly selected to undergo TLE had the examination performed as part of the standard assessment by a consultant dermatologist.

Demographic details recorded included age, gender, personal or family history of melanoma, prior sunbed use, average number of sun holidays per year, prolonged periods spent abroad, and occupation (indoor, outdoor or mixed). Examination was timed for both FSE and TLE. Details of additional identified lesions were recorded. In patients, where additional suspicious lesions were identified, a biopsy was performed.

763 patients consented for participation. 520 of these patients were assigned to FSE and 243 were assigned to TLE. Three patients declined FSE, citing reasons such as time pressure, embarrassment, and menstruation. No patient declined TLE. Most participants were female, middle-aged, white Irish, and worked indoors. 1.3% had a previous history of MM and 7.9% had a family history of MM. 25.6% had previously used sunbeds (Table 1).

On average, FSE took 4.02 minutes from asking the patient to undress to the patient being fully dressed following examination. In contrast, the average TLE took 30 seconds. Therefore, FSE took eight times longer than TLE. FSE took slightly longer in male

patients over 60 years of age (5.6 minutes), whereas the duration of TLE was not dependent on age or gender.

Thirty-seven (7.1%) patients had incidental findings on FSE including inflammatory dermatoses such as psoriasis and eczema, and previously undiagnosed porphyria cutanea tarda (Table 2). Twelve patients (2.3%) had additional lesions biopsied, including a superficial BCC. No additional melanomas were detected that would otherwise have been missed by use of the standard protocol.

Discussion

This study suggests that in low-risk patients attending a PLC referred with a lesion of concern, the possibility of missing incidental cutaneous malignancies using lesion-directed examination is low, and that TLE is a safe and efficient practice in this setting. A previous study has shown that most melanomas are picked up in patients referred with a lesion rather than by routine mole checks. [5] Patients attending our PLC have already been reviewed by their GP and therefore any lesions of concern may have already been identified on FSE in primary care. Dermatologists have also reported patient embarrassment and time constraints as significant barriers to skin cancer screening using FSE. [6-8] In this study, at the time of randomisation, three patients declined participation in FSE, but none declined participation in TLE, suggesting that patient satisfaction with TLE is high.

There may be limitations to extrapolating these data to other regions with higher prevalence of MM, such as Australia and New Zealand. One Australian study showed a high rate of MM incidentally detected on FSE in private practice, mostly in men, with a mean age of 61.9 years in men. [7] Dermatology training may also be impacted if TLE is adopted over FSE, as trainees may have less experience in assessing benign or low-risk lesions such as seborrheic keratoses, angiomas, or benign melanocytic naevi.

Access to specialist dermatologist services is limited, particularly in the COVID19 era. This study showed that FSE takes eight times longer than TLE. While FSE is superior to TLE if resources are unlimited, FSE has minimal benefit in detecting additional skin

cancers, and TLE permits more patients to be seen in our restricted face to face clinic appointments. Therefore, we suggest that TLE be adopted as the standard of care for low-risk patients in PLC to optimise efficiency in the COVID19 era.

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Table 1. Patient demographics with details on melanoma history and sun exposure.

n=520	% (n)
Demographics	
Female gender	71.5% (372)
Average Age	44.9 years
Irish Caucasian	92.1% (479)
Melanoma History	
Personal history of melanoma	1.3% (7)
First degree relative with melanoma	4.6% (24)
Second degree relative with melanoma	3.3% (17)
Two or more relatives with melanoma	0.8% (4)
Sun Exposure History	
Indoor occupation	77.9% (405)
Outdoor or mixed occupation	22.1% (115)
Previous sunbed use	25.6% (133)
Previous phototherapy	0.2% (1)

Migration >12 months outside Ireland	16.3% (85)

Table 2. Additional clinical or histological diagnoses detected on FSE that would not have been detected with targeted lesional examination, excluding seborrheic keratosis, actinic

keratosis, lentigines, viral warts, angiomata, acne, folliculitis, and keratosis pilaris. *Only one attended for confirmatory biochemical diagnosis.

Clinical Diagnosis	
Dermatofibroma	1.9% (10)
Psoriasis	1.2% (6)
Dermatitis	0.8% (4)
Naevus spilus	0.8% (4)
Linear epidermal naevus	0.4% (2)
Porphyria cutanea tarda	0.4% (2*)
Pigmented purpuric dermatosis	0.4% (2)
Halo naevus	0.2% (1)
Becker naevus	0.2% (1)
Lichen simplex chronicus	0.2% (1)
Hidradenitis suppurtiva	0.2% (1)
Port wine stain	0.2% (1)
Erythema ab igne	0.2% (1)
Varicose ulcer	0.2% (1)
Histological Diagnosis	
Dysplastic naevus with mild atypia	1.9% (10)
Blue naevus	0.2% (1)
Basal cell carcinoma, superficial	0.2% (1)