

A Cross-Sectional Survey of a Dermatology Outpatient Service in Malta

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Abstract

A survey of the outpatient service provided by a consultant dermatologist at the national dermatology department in Malta was carried out. The aims of this study were to identify the main conditions being treated and to analyze management and referral practices. Possible implications for future training of primary care physicians were also investigated. The survey was carried out for one week every season over a 12-month period, giving a total study period of four weeks.

Data was collected on a total of 662 patients (401 new patients and 261 follow-ups). The average waiting time for a routine clinic appointment for new cases was 4 weeks, but 18% of patients were seen within 48 hours of referral and 7% were seen within one week. Age-specific attendance rates were highest for females over 50 years and males over 60. Overall, the commonest conditions seen were chronic leg ulcers, psoriasis, skin infections and seborrhoeic keratoses. Skin biopsy was the most frequent investigation performed and topical treatment was the commonest form of therapy. Private general practitioners and government doctors based in health centres accounted for 51% and 29% of all referrals respectively. A diagnosis was offered in 65% of referral notes. Of these, 44% had a diagnosis matching that given by the dermatologist at the patient's first visit. Treatment was attempted prior to referral in 64% of patients with acne but in only 15% of patients with viral warts.

Key words

Dermatology, outpatients, diagnosis, disease management, referral

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Introduction

Dermatology is mainly an outpatient speciality. There is a lack of documented data on the Maltese dermatology outpatient service, regarding referral practices, demographic data of patients making use of the service, their dermatological diagnoses and their management. Such knowledge assists in future planning and enables more efficient running of the service, and also makes the detection of changing trends in dermatology possible.

The Department of Dermatology at Sir Paul Boffa Hospital in Floriana is the only public dermatology department in Malta. It provides an outpatient service supported by facilities for skin surgery, cryotherapy, patch testing, phototherapy and treatment with a pulsed-dye laser, in addition to a leg ulcer clinic where change of dressings and compression bandaging are carried out. These services are provided free of charge to the residents of Malta, estimated at 391,415 in 2000.¹ The medical complement of the department at the time of our study consisted of four consultant dermatologists, a senior registrar, a registrar, a senior house officer, a medical officer and a house officer. In the outpatient department in Gozo, a dermatology clinic is run weekly by a registrar and twice-monthly by a consultant dermatologist. Since only one clinic is held every month by the consultant carrying out this study, it was thought impractical to include Gozo in the survey.

The dermatology department at Sir Paul Boffa Hospital is a secondary referral centre and patients should have first been seen and referred by a doctor. Referral notes marked 'urgent' by the referring doctor entitle the patient to be seen by a dermatologist on the same day or the following working day, but all other referral notes are vetted by a dermatologist three times a week. Early appointments are given when deemed necessary for a weekly 'soons' clinic. There are separate cryotherapy clinics for patients with viral warts and a cautery clinic for patients with skin tags. Patients referred with chronic leg ulcers have a joint dermatologist and nurse initial assessment at the leg ulcer clinic and are then routinely managed by nurses, but with periodical review by their dermatologist. Patients referred for surgery, patch testing, phototherapy or laser therapy are first seen in the general clinics and then referred accordingly. A genitourinary clinic is also held in the department; this is run separately by a genitourinary physician.

Each of the four consultant dermatologists is on call one week of the month. When on call, the consultant sees to

dermatology consultations in other hospitals and runs the 'soons' clinic. He is also responsible for supervising the work of the more junior dermatologists as they attend to the urgent referrals and to the wart and skin tag clinics.

Methods

The survey was carried out by completing a questionnaire for each patient seen in the clinics of one of the four consultant dermatologists (M J Boffa) during a four-week period. A week every season was chosen to eliminate seasonal bias, while avoiding participating doctors' vacation or study leave. To ensure adequate numbers of urgent referrals and 'soons' patients in the study sample, specific weeks when the consultant was on call were chosen. The study period extended from November 2001 to August 2002.

The questionnaire included the patient's demographic data, the diagnosis, investigations requested, type of treatment prescribed and the patient's outcome. Note was taken of whether the referring doctor was a private general practitioner (GP), a GP based in a government health centre, or another hospital doctor. When a diagnosis was offered on the referral note, this was compared to the dermatologist's initial diagnosis and also to the final diagnosis established following investigation. Where relevant, the patient was asked whether any treatment had been prescribed prior to referral. The percentage of outpatients eligible for free medicines was also determined.

Waiting times for new patients were measured in weeks from the date of receipt of the referral letter to the date of attendance. Diagnoses were classified according to the World Health Organisation's International Classification of Diseases (ICD-10), supplemented with the ICD for Oncology (ICD-O) for skin cancer lesions.

Statistical analysis

Data was analysed using SPSS (version 10.0.5) to estimate frequencies, significant differences and correlations. As only

on-call weeks were chosen for the study and a consultant dermatologist is normally on call one week a month, an average of the on-call clinic results was used when discussing their percentage contribution to the consultant's monthly workload. This was done by dividing the total number of patients attending each on-call clinic and their diagnoses, investigations, treatment modalities and outcomes by four. The on-call clinics included the wart, skin tag and 'soons' clinics and the urgent referrals.

Figure 1: Gender and age distribution of the dermatology outpatients according to the type of clinic attended

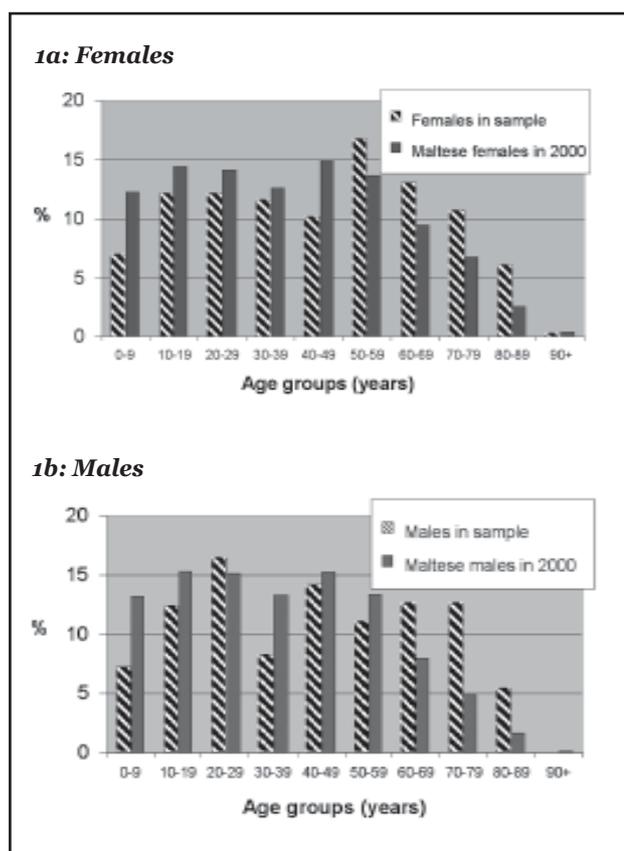


Table 1: Gender and age distribution of the dermatology outpatients according to the type of clinic attended

Clinics	Number of patients		Number of patients			
	Gender		Age (in years)			
	Males	Females	0-15	16-29	30-59	60+
Main clinics	88	100	22	33	79	54
'Soons' clinics	25	22	6	9	11	21
Urgent referrals	52	64	23	22	33	38
Leg ulcers	24	37	0	0	12	49
Wart clinics	94	70	25	62	58	19
Skin tag clinics	11	25	1	3	27	5
Theatre	11	16	0	3	13	11
Laser clinics	8	15	7	6	10	0
Total	313	349	84	138	243	197

Results

Data was collected on 662 of the 687 patients registered at the dermatology reception desk during the four study weeks, giving an overall response rate of 96%. The excluded patients were mostly self-referred with very minor conditions. Table 1 shows the demographic data of the patients in our sample, according to clinic attended. Twice as many females as males attended the skin tag, laser and leg ulcer clinics, but this was not statistically significant. Males were found to be significantly more likely to attend wart clinics [odds ratio 0.47; 95% confidence interval (CI) 0.29-0.76]. Age-specific attendance rates were highest for females over 50 years and males over 60 (Figs 1a and 1b).

The numbers of new and follow-up patients seen in the various clinics is shown in Table 2. Of the new referrals, 50% were seen in the routine main clinics, 18% were seen urgently and 7% were seen in the 'soons' clinics. Patients with leg ulcers

accounted for only 2% of new referrals but 25% of all the review patients. At the time of our study, waiting times for new patients averaged 4 weeks for the main clinics, 3 weeks for the wart clinics, 5 weeks for the skin tag clinics, and less than 1 week for leg ulcer patients.

Chronic leg ulcers (mostly venous), psoriasis, viral warts and other skin infections, and seborrhoeic keratoses were the commonest conditions in our study sample (Table 3). More than one diagnosis was recorded in 65 patients (10%), with three patients having three conditions diagnosed. The commonest ten diagnoses for patients referred urgently are shown in Table 4; infections and eczema accounted for more than one third of all urgent referrals. Table 5 shows the investigations requested, treatment prescribed and outcome of the outpatients. Skin biopsy was the commonest investigation performed; few patients needed blood or microbiology tests. As expected, topical treatment was the commonest form of therapy. Of the

Table 2: New and review patients seen in the various dermatology clinics

Clinics	New Referrals		Review patients	
	No.	% (n=165.5*)	No.	% (n=224.3*)
Main clinics	83	50.2	105	46.8
Soons*	47 (11.8)	7.1		
Urgent referrals*	116 (29.0)	17.5		
Leg ulcers	4	2.4	57	25.4
Wart clinics*	117 (29.3)	17.7	47 (11.8)	5.3
Skin tag clinics*	34 (8.5)	5.1	2 (0.5)	0.2
Theatre			27	12.0
Laser			23	10.3
Total	401	100	261	100

* the total number of patients attending each on-call clinic during the four study weeks was divided by four (figures shown in brackets) to give the average monthly representation for the clinic for the consultant

Table 3: The commonest diagnoses seen in the outpatients clinics

Diagnosis	% (n=389.8*)
Chronic leg ulcers	14.9
Psoriasis	12.0
Viral warts	9.2
Other skin infections	3.9
Seborrhoeic keratoses	6.0
Melanocytic naevi	4.2
Non-melanoma skin cancers	3.3
Acne	3.2
Skin tags	3.1
Eczema	2.8
Actinic keratoses and Bowen's disease	2.2

* includes averaged monthly results for the on-call clinics

Table 4: The commonest reason for urgent referral

Diagnosis	% of all urgent referrals (n=116)
Infection	28
<i>funga</i>	10
<i>viral</i>	9
<i>bacterial</i>	6
<i>infestation</i>	3
Eczema	14
Non-melanoma skin cancer	7
Urticaria	5
Seborrhoeic keratosis	4
Pityriasis rosea	3
Insect bites	3

Table 5: Investigations, treatment modalities and outcome of the outpatients

	New patients % (n=165.5*)	Review patients % (n=224.3*)
Investigations		
Blood tests	3.9	13.4
Mycology	1.7	0.4
Bacteriology	0.5	0.0
Patch tests	0.3	0.4
Skin biopsy	11.5	12.9
Radiology	0.2	0.4
None	82.8	75.5
Treatment		
Topical	39.3	45.2
Oral	12.5	15.1
Surgery	12.5	6.9
Cryotherapy	26.3	6.4
Cautery	7.9	0.2
Compression bandaging	2.4	22.6
Laser	1.2	9.3
None	11.3	4.9
Outcome		
Discharged	58.3	15.6
Dermatology OP	37.3	83.0
Plastic surgeon	3.2	0.3
Other hospital OP	1.2	1.1

* includes averaged results for the on-call clinics

new patients seen, 58% were discharged after their first visit, but 83% of review patients were followed up further. None of the patients in our sample needed admission to the Dermatology Ward.

Private GPs and health centre GPs accounted for most of the referrals; other hospital doctors referred only 8% of the patients in our sample (Table 6). A diagnosis was offered in 65% of referral notes, more frequently in the case of referrals from private as compared to health centre GPs (odds ratio 1.63; 95% CI 1.12-2.38). Of the referral notes with a tentative diagnosis, 44% had a diagnosis matching the one given by the dermatologist at the patient's first visit; the difference in results between health centre GPs, private GPs and other hospital doctors was not statistically significant. Viral warts and skin tags were excluded from this analysis as their large number and comparatively easy diagnosis would have introduced a significant bias.

The commonest sixteen diagnoses offered by the referring doctors were ranked in order of frequency and the series was then compared to the sixteen commonest diagnoses made by the dermatologists, again ranked in order of frequency. A close correlation was found between the two series (Kendall's tau_b rank correlation coefficient 0.73, significant at the 0.001 level, 2-tailed p=0.00016). It could be noted, however, that actinic keratoses were underdiagnosed by referring doctors, and that dermatologists were more specific when describing eczemas.

Patients with easily recognisable and treatable conditions were asked whether treatment was attempted by their doctor prior to referral. Treatment had been attempted in 64% of patients with acne, 61% of patients with eczema, 57% of patients with urticaria, but only 15% of patients with viral warts. Thirty-one percent of all the patients in our sample were eligible for free medicines due to social reasons (22%) or because they suffered from psoriasis (9%).

Table 6: Source of referral and percentage agreement between the referring doctor's offered diagnosis and that made by the dermatologist (viral warts and skin tags have been excluded)

Source of referral	% offering diagnosis	% agreeing with dermatologist's initial diagnosis	% agreeing with final diagnosis
Health centre GP (29% of referrals)	57.9	38.8	38.0
Private GP (51% of referrals)	67.4	45.9	45.5
Other hospital doctor (8% of referrals)	70.2	46.8	44.7
Untraceable (12%)			
All	65.0	43.9	43.2

Discussion

Our study shows higher attendance rates at dermatology outpatients for females and the elderly. This could be due to the clinics being held on weekday mornings, which makes it more difficult for working patients to attend. The range of diagnoses and the use of investigations as reported in our study are similar to British and Scottish studies.^{2,3} The commonest ten diagnoses accounted for only 65% of cases seen, reflecting the large number of possible diagnoses in dermatology. However, the higher numbers of patients with psoriasis as compared to eczema seen at our outpatients is the reverse of the situation in the United Kingdom. This could be due to the fact that, in Malta, psoriasis is practically the only skin condition that entitles patients to free medication, regardless of their socio-economic situation. As the medication is collected from the pharmacy at the dermatology department, it encourages patients suffering from psoriasis to attend the government rather than a private service.

A high 18% of all new referrals were seen urgently, much more than the 6.5% in the Scottish study where urgent referrals were arranged by telephone.² This must reflect the relative ease of urgent referral to our department. In our survey, the commonest conditions seen urgently were skin infections, considered a priority by the referring doctor due to fear of spread or the possibility of aggravation of the infection should the wrong treatment be prescribed. Other urgent referrals included conditions where the severity of symptoms, for example pruritus associated with eczema or urticaria, could lead the patient to pressurize the doctor to an urgent referral. Lesions suspected to be malignant, such as pigmented seborrhoeic warts and non-melanoma skin cancers, were another common reason for urgent referral. This reflects an awareness - by both the public and general practitioners - of the importance of early diagnosis of malignant melanoma. As would be expected with an average malignant melanoma incidence of 26 per year for the Maltese population,⁴ no malignant melanomas were detected in this sample. The option of urgent referral greatly decreases the waiting time for a dermatology review; however, since the number of urgent referrals cannot be predicted on a daily basis, when numbers are high the smooth running of the clinics may be disrupted.

In our study, as in the British studies, surgical excision was a common treatment modality despite the low numbers of malignant skin tumours. This reveals a degree of diagnostic uncertainty also on the part of the dermatologist, and perhaps a readiness to perform excisions that could be more for cosmetic reasons.

Of the 65% of referral notes offering a diagnosis, only 44% agreed with the dermatologist's initial diagnosis. Although low,

this percentage compares very well with the 47% rate in a recent British study (that had included viral warts and skin tags).⁵ This shows that most of the referrals are for diagnostic purposes in addition to management. Adequate clinical details on the referral note might therefore be more helpful to the vetting dermatologist than an offered diagnosis.

One would expect patients with conditions such as urticaria and viral warts to be referred to a specialist only if resistant to first-line treatment. Their low rates of attempted treatment prior to referral argues for the need for a vocational training scheme in dermatology for Maltese GPs. Such a scheme is planned to begin in the near future and should increase the confidence of GPs when managing common dermatological conditions.

Our survey would have provided a more true representation of the dermatology outpatients if patients of all four consultant dermatologists had been included, as for each consultant one expects a bias according to his special interests. However, this would have been more difficult to coordinate and might have resulted in lower doctor participation rates.

Genitourinary cases were not included in the survey as the genitourinary clinic is run separately by the genitourinary specialist.

Data collection is an important first step prior to making recommendations about a service. It is hoped that the results of our study will be used to improve the provision of dermatological care to the Maltese population at dermatology outpatients and also at primary care level.

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