

The Impact of appointment interruptions due to COVID-19 in patients being treated with phototherapy

Nicola Darmanin, Monique Cachia, Lawrence Scerri,
Josephine Sammut, Francis Zammit

The phototherapy unit in Malta, previously located at Sir Boffa Hospital in Floriana, had an annual turnover of around 11 thousand visits. Many of these patients suffer from moderate-to-severe psoriasis (plaque, guttate and palmo-plantar), but other indications include eczema, mycosis fungoides, morphea and others.

In view of the current COVID-19 pandemic this phototherapy unit was closed and treatment of patients receiving light therapy was forced to cease. The aim of this short study was to follow up patients previously receiving phototherapy, to assess the effect of the abrupt halt in treatment on their clinical condition and their quality of life.

In summary, closure of the service has led to a general worsening of patients' clinical condition, with 54.21% of the patients interviewed having felt worse whilst off treatment when compared to being on treatment 3 months prior, and 4 of the 83 individuals (4.8%) having to be placed on systemic immunosuppressant agents.

Nicola Darmanin, BSc, MSc, MSc
Pract Derm, MD
Mater Dei Hospital
Msida, Malta

Monique Cachia, MD, MRCP(Derm),
Mater Dei Hospital
Department of Dermatology
Mater Dei Hospital
Msida, Malta

Lawrence Scerri, MD, FRCP
Department of Dermatology
Mater Dei Hospital
Msida, Malta

Josephine Sammut, BSc
Phototherapy (PUVA) Unit,
Department of Dermatology
Mater Dei Hospital
Msida, Malta

Francis Zammit, MSc
Mater Dei Hospital
Msida, Malta

INTRODUCTION

The 2019 novel coronavirus (COVID-19) was initially identified in Wuhan, China, back in December 2019¹ and announced as a pandemic by the World Health Organization (WHO) in March 2020.² The first COVID-19 case in Malta was recorded on the 7th March 2020,³ with lockdown measures starting as of the 12th March 2020 and elective outpatient clinics at the National Health Service Hospital being halted on the 15th March 2020.³

Prior to the COVID-19 outbreak, Malta's national Dermatology services were based at Sir Paul Boffa Hospital. However, from the start of the pandemic back in March 2020, this hospital was reassigned as a facility to house COVID-19 positive patients who could not self-quarantine in their households; with dermatology services eventually moved to the island's main hospital, Mater Dei Hospital (MDH). As a result of the new COVID-19 measures and the eventual logistic relocation, phototherapy services in Malta were interrupted between March 2020 up until November 2020.

The main objective of this study was to assess patients' self-reported clinical condition and its effect on their quality of life following the abrupt halt in phototherapy treatment.

MATERIALS AND METHODS

Phototherapy unit records from the month of January 2020 up until the last day of treatment in March 2020 were obtained. A total of 118 patients received phototherapy in this time. Very few patients had been referred for granuloma annulare, vitiligo and unspecified pruritus, and thus were excluded, leaving a total of 83 patients.

The following information from these phototherapy unit records were obtained: age, gender, indication for phototherapy, type of phototherapy (narrowband UVB vs PUVA), session number (since start of current phototherapy course until last session), and improvement seen with current course. Patients were contacted in June 2020 via telephone and asked a range of questions via a 'modified' Dermatology Life Quality Index (DLQI) score, simplified to target a telephone questionnaire (Table 1). Additionally, patients were asked if their condition worsened since the closure of the phototherapy unit. For those in whom worsening of their general condition was observed, the time taken for the relapse to occur was noted. It was also documented if the patient was started on a systemic therapy to replace the phototherapy.

RESULTS

A summary of the results can be found in Table 2. From the 83 participants questioned, 55.4%⁴⁶ were males and 44.57%³⁷ were females, with an average age of 51.35 years. The average total number of

sessions from the start of 2020 until March 2020 was 44.08 with most sessions being for UVB (86.75%) as opposed to 13.25% undergoing photochemotherapy with PUVA; 69 of the 83 individuals (83.13%) stated that they saw an improvement with phototherapy after their last session, whilst 14 stated that they did not see any improvement with from their phototherapy sessions. 57.8%⁴⁸ stated that they 'relapsed' after closure of the unit, whilst 42.1%³⁵ stated that they did not. For those that did relapse, the average time it took to note a change in skin condition was 2.23weeks (15 to 16days). Figure 1 demonstrates the time taken for relapse when comparing different skin diseases. The greatest indication for phototherapy was psoriasis at 66.77%, followed by mycosis fungoides at 13.25%, eczema at 9.64% and the sclerosing skin conditions (localized scleroderma at 3.61% and unspecified scleroderma at 1.2%). A score of percentage of patients affected by their skin condition at the time of questioning was obtained from the combination of scores in the modified DLQI score; 25.3% of patients were greatly affected by their skin condition, in comparison to 12.04% who were not affected at all. When comparing the overall modified DLQI score at the time of questioning to how they felt whilst on therapy, 54.21% felt they were overall worse.

DISCUSSION

The DLQI score is a validated tool/outcome measure that can be used to assess the physical, psychological and social wellbeing of patients being treated in a phototherapy unit. A modified version of this score was used to assess the impact of the patient's current skin condition off therapy, as compared to whilst on therapy back in March 2020. Data gathered highlighted that 42.16% described their skin as sore/itchy/painful; with 42.16% stating that it was more so than when on UV therapy. When asked, 55.41 % felt embarrassed/self-conscious about their skin, although 51.80% stated that it was comparable to when on treatment. This highlights the impact of skin disease on the psychological well-being of individuals. When asked about the effect their skin had on their work, home, and leisurely activities, 39.3% noted a considerable impact, with 60.24% stating that this is comparable to when on therapy.

In Malta, comparable to the UK,⁴ psoriasis is the greatest indication for phototherapy. In this study 66.77% of patients receiving phototherapy had psoriasis (including plaque, palmoplantar and guttate psoriasis). Mild plaque psoriasis is usually managed with topical therapy alone, with the addition of narrowband UVB phototherapy and PUVA in patients whose symptomatology and rising Psoriasis Area and Severity Index (PASI) score cannot be controlled by topical therapy alone.⁵ Phototherapy is also beneficial in the management of other skin diseases including eczema, cutaneous T-cell lymphoma, vitiligo, prurigo and others.

Phototherapy provides many dermatology patients with an effective treatment option that does not involve use of immunosuppressants. With no global guidelines for the safe treatment of patients, many phototherapy centres limited their services or stopped treating patients completely. In a similar study conducted on a phototherapy unit in Brazil, the disease severity of patients after cessation of therapy was evaluated using questionnaires during a medical appointment.⁶ Prior to cessation of therapy, a plan of action recommending whether each patient should continue phototherapy had been taken. 81% of patients stopped phototherapy; 33.7% of their own accord and 47.7% on medical recommendation. 95% of patients who stopped phototherapy (for whichever reason) reported a worsening of their disease.

This sudden cessation of phototherapy coupled with an increase in stress brought about by the pandemic, has caused these chronic dermatoses to become poorly controlled. In our study, 4 of the 83 (4.8%) individuals contacted took systemic agents after closure of the service. The use, including both discontinuation and initiation, of biological therapy and systemic agents during the pandemic has been a matter of much debate, with institutions concerned on the possible increase in morbidity and mortality from an underlying COVID-19 infection, especially in a co-morbid patient.² At the time of data collection, recommendations were unclear and vague. To date, there has been no evidence that patients on

immunosuppressants are at a greater risk of contracting COVID-19 or develop a more severe form of the COVID-19 infection.⁷ Whilst it has been recommended to continue immunosuppressants in patients who are well, starting patients on a biological agent or other systemic agents should be considered on a case-by-case basis.⁷

In view of the small sample size, we were unable to obtain statistically significant results. Further to this, we were unable to include an objective measure of severity and extent of psoriasis via a PASI score, as the patients were contacted via telephone. For a better understanding of the severity and relapse rate, comparison with similar data obtained from (ideally the same) patients having previously received the full prescribed course of their therapy is needed. In our data collection, we had not specified if phototherapy had been halted at the start or towards the end of the treatment course. Lastly, outpatient records were not obtained. It is possible that in addition to the four individuals who were started on systemic agents, others had been advised to do so by their dermatologist.

In conclusion, the 9-month suspension of the phototherapy service in Malta led to a general worsening of patients' clinical condition, with 54.21% of the patients interviewed having felt worse whilst off treatment, and 4 of the 83 individuals (4.8%) having to eventually be placed on systemic immunosuppressant agents.

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