

The profile of teledermatology consultations during the COVID-19 pandemic: An observational study

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ABSTRACT

Background: The COVID-19 pandemic has caused major disruptions in healthcare settings all over the world. During the lockdown period, teledermatology (TD) played a salient role in helping aggrieved patients receive treatment. **Material and Method:** The following is a retrospective, observational study carried out over 6 weeks at two centers in which TD consultations during the pandemic were evaluated. **Results:** A total of 300 patients (male:female = 167:133) with a mean age of 28.34 ± 7.2 years were evaluated. The most common age group was 20–40 years old (40.66%; n = 122). Almost three-fifths of the patients (58%; n = 174) consulted for the first time. Noninfectious conditions predominated (62%; n = 186), with eczema and dermatitis (19.3%; n = 57) being the most common, and with dermatophytosis and fungal infections (15.7%) being the most common among the infectious disorders. **Conclusions:** Because dermatology is a visual branch of medicine, TD has the potential to play a major role in providing dermatological care to a large number of patients in the future.

Key words: Teledermatology; COVID-19; Dermatology patients

INTRODUCTION

The novel coronavirus disease COVID-19, which emerged in the Chinese region of Wuhan, has now spread all over the world, and, as of May 2020, more than 7 million people have been affected by the SARS coronavirus 2, with more than 413,000 deaths worldwide. With the WHO having declared a state of a pandemic, Europe, the USA, South America, and South Asia have been the regions most heavily affected by the virus [1]. The sudden outbreak severely disrupted healthcare delivery all over the world, and outpatient departments were closed in a large number of countries to prevent disease transmission. In order to contain COVID-19, in-person consultations were limited during the lockdown period in various countries exclusively for emergency cases. Even dermatologists were employed on the frontline at various places [2]. During this phase, the use of telemedicine was advocated by governments and various medical associations to provide patients with treatment and follow-up consultations [3,4]. Teledermatology (TD) is a subspecialty of dermatology that utilizes information

and communications technologies (ICTs) to diagnose, monitor, treat, and educate people remotely, as well as prevent and research various dermatological cases [5]. It is believed that, originally, TD was given mainly to rural communities and soldiers in distant regions with limited access to physicians [6]. TD provides patients with continuous access to dermatologic care and is a safer way of providing medical treatment.

This study was conducted to evaluate the profile of teledermatology consultations during the period of the COVID-19 pandemic.

MATERIALS AND METHODS

The following is a retrospective, observational study carried out over a period of 6 weeks at two centers in which 300 teledermatology consultations during the COVID-19 pandemic were evaluated. All consultations were done over video-consultation platforms, and the demographic and clinical details of the patients were noted. Those patients requiring physical examination

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or specialized procedures such as skin biopsy were advised to visit an outpatient department after the resumption of in-person dermatological services.

RESULTS

A total of 300 patients (male:female = 167:133) aged between 1 month to 78 years (with a mean of 28.34 ± 7.2 years) were evaluated in the study. The most common age group applying for consultation was 20–40 years old (40.66%; n = 122), 0–20 years old (27.33%; n = 82), and 40–60 years old (23.33%; n = 70). Most of the patients (91%; n = 273) resided in an urban environment, and the majority (84%; n = 252) were using a cell phone for the consultation. Almost three-fifths of the patients (58%; n = 174) consulted for the first time, but 42% (n = 126) were following up on their previous outpatient department consultations. Noninfectious conditions constituted a majority of the consultations (62%; n = 186), with eczema and dermatitis (19.33%; n = 58) and acne (14.6%; n = 44) being the most common of the conditions presented, and with dermatophytosis and fungal infections (15.7%; n = 47) being the most common infectious conditions (Table 1). A total of 16 patients were advised to visit an outpatient department after the resumption of in-person services, as they required physical examination or procedures such as dermoscopy or skin biopsy.

DISCUSSION

Teledermatology has emerged over the past few years as an important initiative, but is still not used frequently enough both by the patients and the dermatologists, both of whom having been more comfortable with

traditional face-to-face consultations [7]. Owing to the introduction of social-distancing measures and to the disruption of health services led to by the COVID-19 pandemic, telemedicine was advocated by governments and various medical associations to cater to the needs of patients. Prior to the pandemic, there were no set guidelines for the use of telemedicine in countries such as India, but now governments and medical bodies have come up with stringent telemedicine guidelines [3]. Because dermatology is mainly a visual specialty, teledermatology can be an important tool in reaching out to patients, especially in times of a pandemic, to reduce patient load and overcrowding in outpatient departments. Owing to the great availability of smartphones and high-speed access to the Internet, patients can easily use teledermatological services without leaving the safety of their homes. Being the need of the hour in such trying times, TD can be provided without exposing physicians and patients to the risk of viral transmission [8]. One of the recent Indian studies demonstrated a drastic increase in the use of TD from 23.5% before the pandemic to 66.9% after [9].

In our study group, young patients aged between 20 and 40 years and residing in an urban environment were the most common participants, which can be attributed to the great availability of high-speed Internet access and heightened medical awareness. In our study, dermatitis and eczema were the most common noninfectious conditions, whereas fungal infections were the most common infectious conditions, which is similar to the profile of dermatological patients in typical outpatient departments, as reported in various studies [10–12]. Most of the patients were prescribed the necessary

Table 1: The profile of dermatological conditions consulted by teledermatology during the COVID-19 pandemic

| Dermatological Conditions | | No of patients (n=300) | Percentage |
|----------------------------------|--|------------------------|------------|
| Non-infective (n=186) | Eczema and Dermatitis | 58 | 19.3 |
| | Acne | 44 | 14.6 |
| | Hair disorders | 21 | 7 |
| | Melasma | 19 | 6.3 |
| | Psoriasis and other papulosquamous disorders | 17 | 5.7 |
| | Vitiligo | 12 | 4 |
| | Urticaria | 8 | 2.7 |
| | Others | 7 | 2.3 |
| | Infections and infestations (n=114) | Fungal infections | 47 |
| Scabies | | 19 | 6.3 |
| Bacterial infections | | 16 | 5.3 |
| Herpes Zoster | | 12 | 4 |
| Warts | | 9 | 3 |
| Molluscum contagiosum | | 5 | 1.7 |
| Varicella | | 3 | 1 |
| Herpes Simplex | | 3 | 1 |

medication online, but 16 were advised to visit an outpatient department as they required a physical examination or procedures such as patch testing, skin biopsy, or dermoscopy.

Teledermatology can be an important tool in situations of a pandemic and in areas of inadequate healthcare infrastructure or lacking in dermatologists. With the great availability of smartphones and high-speed Internet access, TD can easily be used for consultation by patients from the remotest of locations, and, during the period of a pandemic, it can help in reducing the crowdedness of outpatient departments, playing an important role in lowering the risk of disease transmission. Nevertheless, teledermatology has certain limitations, for instance, if a patient requires physical examination or procedures such as skin biopsy and, hence, requires an in-person visit in an outpatient department. Additionally, TD limits the doctor's ability to show empathy, understand their patient's needs, and counsel them adequately. Lastly, there arises a chance of missing or delaying the diagnosis of incidental pathologies, especially skin malignancy [13]. While teledermatology continues to create various challenges, the COVID-19 pandemic has created a window of opportunity for the development and exploration of this technology.

Statement of Human and Animal Rights

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2008.

Statement of Informed Consent

Informed consent was obtained from all patients for being included in the study.

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