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## Letter to the Editor

# Internet-based remote consultation facilitates the medical care of patients with chronic skin diseases during COVID-19 pandemic



Dear Editor,

As a pandemic emergency, the ongoing coronavirus disease 2019 (COVID-19) has globally affected people in different population and greatly disrupts their social lives.<sup>1</sup> Several measures have been carried out by many countries to prevent the transmission of this disease, including testing and treatment of COVID-19 patients, quarantine of suspected individuals, contact tracing, gathering restriction, home quarantine, complete or partial lockdown of contaminated building or area.<sup>1</sup> These prevention and control measures have been effectively in controlling the global spread of COVID-19. However, the mandatory restrictions and lockdown would influence the routine treatments of patients with other chronic diseases.<sup>2</sup>

Home quarantine and lockdown policy have been significantly decreased the number of patients who request dermatological medical care.<sup>3</sup> For example, as a provincial hospital for dermatology, the number of outpatients of Shandong Provincial Hospital for skin diseases in the first quarter of 2020 was 46,320 in the early stage of the COVID-19 outbreak, which decrease 29.60% compared to the same period in 2019. Especially, in the initial stages of home quarantine and lockdown, the number of monthly outpatient visits showed a trend of sharp decrease in our hospital. Compared with the outpatient volume in January (18,847), the volume in February (7782) was decreased by 58.7%. Similar situations were observed in other hospitals in China or other countries.<sup>3</sup> To reduce the risk of infection in hospital during the COVID-19 outbreaks, telephone-based consultation was applied in many countries.<sup>4</sup>

To explore more reliable ways of consultation for the patients with chronic skin diseases, we enabled the internet hospital in February 2020. The patients who visited our hospital previously were asked to provide a detailed description regarding their medical conditions and upload their historic medical records and the photos of skin lesions through an instant pre-designed chatting platform on the internet hospital. The prescription was made by doctors through internet consultation, and the pharmacy dispensing were processed once the pharmacists received the electronic prescription from the internet hospital. Subsequently, the medicine was delivered to patients by a contactless express delivery in next three days [Fig. 1].

From February 4th to July 13th, 2020, a total of 3533 online consultations were made through our internet hospital. The majority of patients were from 17 different cities of Shandong Province, and the rest were from 27 other provinces in China. According to our data, psoriasis (24.3%), eczema (19.7%), dermatitis (12.8%), vitiligo (11.4%), acne (5.3%), urticaria (2.5%), folliculitis (2.0%), seb-

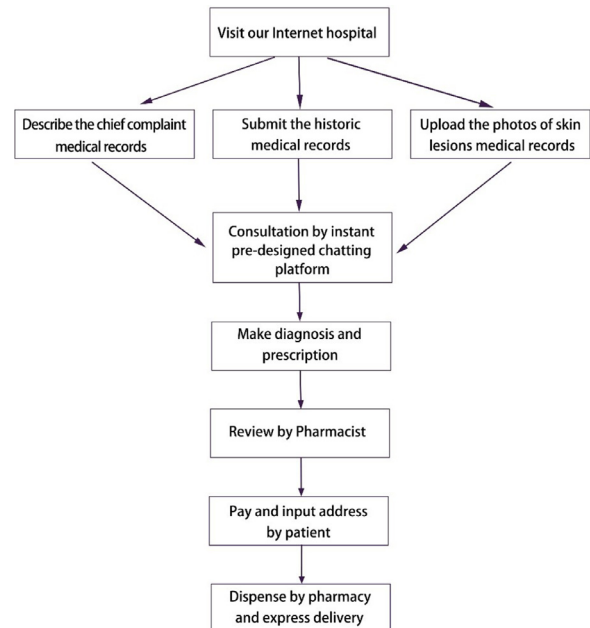


Fig. 1. The flowchart of Internet hospital service.

orrheic dermatitis (1.7%), prurigo (0.85%) and tinea pedis (0.76%) were the most common skin diseases on internet-based consultation. The top five prescribed drugs include steroid ointment, Chinese traditional medicines for the treatment of psoriasis and vitiligo, moisturizer, antihistamine and topical vitamin D analogues (calcipotriol ointment).

The internet-based medical services combining medical services and internet technology have been recognized as one of the most innovative services in 21st century,<sup>5–6</sup> which enable people to overcome geographical obstacles to access convenient health care. The first internet hospital in china was launched in 2013.<sup>6</sup> Until May 2020, the number of internet hospitals has increased from 170 before the outbreak to more than 1000 after the outbreak,<sup>7</sup> which was promoted and scaled up to reduce the risk of transmission during the pandemic COVID-19. And also this kind of medical services has been applied in many other countries, such as United Kingdom,<sup>8</sup> United States of America<sup>9</sup> and Australia<sup>10</sup>, facilitating the medical care of patients with chronic diseases.

In conclusion, the internet-based remote consultation could be an effective approach for the patients with chronic diseases to receive medication, especially during the COVID-19 or future outbreaks of other infectious diseases. More investigations should be done to further ensure the safety of patients on internet hospital.

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