
Abstract

Healing From a Distance: A Cross-sectional Study on the Diagnostic Reliability of Store-and-Forward Teledermatology

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Abstract

Background: Telemedicine delivers health care services between two distant locations through the use of information and communication technology. Several medical specializations, such as dermatology, have incorporated telemedicine into their practice. Since dermatologists are trained to diagnose skin, hair, and nail conditions with a clinical eye, teledermatology may be an alternative when a traditional face-to-face clinic visit is not feasible.

Objective: The purpose of this study was to evaluate the diagnostic reliability of teledermatology.

Methods: A cross-sectional study was conducted among patients from 2 government hospitals. A total of 39 patients were seen in a face-to-face setting and diagnosed by a consultant dermatologist. A written history of their present illness and accompanying photographs were taken and were shown to 3 consultant teledermatologists, who then diagnosed their condition. Two senior dermatology residents then rated the face-to-face and teledermatology diagnoses as either complete agreement, partial agreement, or no agreement. Descriptive statistics was used to summarize the general and clinical characteristics of the participants. The Cohen kappa was used to assess agreement in the evaluations between the teledermatology and face-to-face diagnoses by senior resident raters #1 and #2.

Results: Over 70% of the diagnoses were deemed as either partial or in complete agreement with the face-to-face diagnosis for senior resident rater #1. Similarly, over 80% of the diagnoses were deemed as either partial or in complete agreement with the face-to-face diagnosis for senior resident rater #2. The agreement between the ratings of senior residents #1 and #2 ranged from fair to substantial.

Conclusions: The findings of the study showed that the diagnostic concordance of in-person clinicians and teledermatologists ranges from fair to substantial, with over 70% of the diagnoses in partial or complete agreement. Although face-to-face consultations remain the gold standard, teledermatology is an important alternative where dermatologic care is not accessible.

Conflicts of Interest: None declared.

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KEYWORDS

teledermatology; concordance; reliability

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