

Teledermatology benefits and risk factors in treating people with melanoma.

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Abstract

Telemedicine is a contemporary technology that enables remote medical care. Dermatology is ideally suited for this type of healthcare system because it is a visually-reliant speciality. This has been demonstrated in several recent research that focused on the viability and dependability of teledermatology. While the morbidity of skin cancer is on the rise, many patients still lack access to proper dermatological care. The advancement of technology has made it possible for practitioners to treat a variety of patient populations who require skin knowledge without raising their overhead costs.

Keywords: Teledermatology, Melanoma, Skin cancer

Health care professionals can utilise teledermatology to deliver clinical services to patients, monitor patient health, confer with other healthcare professionals, and give patients access to educational resources, among other uses. Teledermatology appears to hold the key to solving a number of problems relating to the detection, monitoring, and treatment of malignancies as well as pigmented skin diseases.

A new technology that offers medical information and remote health care help is referred to as telemedicine. The World Health Organization defines health care delivery broadly as: "the provision of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and communities [1].

The history of telemedicine extends back to the 19th century, when ship captains used radio to get medical advice and telephone lines to transmit electrocardiograms. When teledermatology became significant in Norway in a number of medical specialities, including radiology and pathology, it was first described in medical literature in 1993 [2].

Study design and data collection

The goal of this study was to describe the current state of teledermatology research and highlight its most recent accomplishments. First, a thorough examination of the literature was conducted. The phrases "teledermatology," "melanoma," and "diagnostic" were used in a PubMed

database search to find articles that were pertinent to the subject at hand.

Rapid technological development

The rapid development of new technology that changed communication and information gathering methods can be used to explain why telemedicine is attracting more and more interest. Nowadays, people frequently utilise cellphones, computers, and other gadgets with Internet access. They are more affordable, portable, and effective, making them ideal for telemedicine. The fundamental problems with providing health care are accessibility, quality, and cost-effectiveness. It appears that telemedicine can handle all of them [3].

The burden of dermatological diseases

Dermatology is one of the disciplines that relies on sight the most, making it a good candidate for telemedicine. The majority of skin problems are visible to the naked eye, making it possible for imaging tools to capture them precisely. The collection, storage, and transmission of clinical data is the core objective of teledermatology. Melanoma, the most dangerous type of skin tumour, is caused by malfunctioning melanocytes, which are cells that produce the pigment melanin.

Melanoma makes up the majority of malignancies that cause death, although in most cases, it can be totally cured with early detection and treatment. The treatment plan is determined by the cancer's stage, thickness, and degree of invasion at the time of diagnosis. These traits have a strong correlation with prognostic variables. The best method to identify skin cancer in its early stages is to keep an eye on how skin lesions change over time, including their colour, shape, and size. The length of patients' lives is determined by early detection.

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Importance of Dermatological Consultation

According to a population-based survey conducted in the Netherlands, skin conditions make up 12.4% of the illnesses that patients consult their primary care physician for. The majority of patients who alert doctors of their skin conditions are treated only by them without any dermatologist consultation. Numerous studies have shown that dermatologists are more accurate at diagnosing melanoma and managing pigmented lesions than family doctors. An Irish study with 493 patients found that dermatologists were more accurate in 87% of cases where the diagnosis was supported by a biopsy than family doctors were in 22% of cases.

Demand for dermatological care

Because skin problems are mostly visible, dermatology specialisation is frequently linked to better patient outcomes. Numerous recent studies have proven that poor access to healthcare, particularly without dermatological evaluation, contributes to the detection of late-stage melanoma. Shorter work hours and earlier retirement among dermatologists, a new trend, are other factors causing limited access to this speciality. Due to population ageing and increased rates of skin cancer, there is a growing need for doctors [4].

Management of Skin Lesions

The "Guidelines of care for the management of primary cutaneous melanoma" state that the most reliable way to determine a cancer diagnosis is through biopsy. Incisional (which removes a portion of a lesion) and excisional are the two basic forms of biopsy that can be identified (which removes the entire lesion). The best method is an excisional biopsy, which should cover the entire width of the lesion. Using an elliptical or punch excision can help with this. Shave removal is also used, but only in situations when a broad biopsy specimen is needed or when lentigo maligna is anticipated and not expected to result in melanoma.

In order to eliminate the subclinical component of melanocytic lesions, margins should be small, typically 1-3 mm. The longitudinal axis should be followed when positioning the cut. Only under specific conditions, such as: low clinical suspicion of malignancy, big lesion, and face or acral site, may incisional biopsy be useful. If an initial specimen is insufficient for a diagnosis or for precise microstaging, a second biopsy should be done. Each sampled lesion should be delivered in turn to a pathologist along with the necessary details for identification. Maximum tumour thickness, the presence or absence of

ulceration, and mitotic rate are three histologic characteristics that are very crucial to the procedure's outcome [5].

These are necessary components that must be included in a pathologic report. The gold standard for accurate diagnosis is a biopsy; however dermoscopy may be just as helpful and exact. Numerous images are needed to categorise and diagnose skin lesions in teledermatology, a rapidly expanding field of study. It appears to be the right course of action. High concordance between teledermatology and conventional face-to-face clinical diagnosis has been demonstrated in numerous investigations. What should be emphasised is that providing more details tends to increase the credibility of teledermatology.

Conclusion

Dermoscopy increases accuracy when added to regular photos. Additionally, examination expertise directly enhances the effectiveness of melanoma detection, especially when compared to diagnoses based solely on visual observation. The advent of teledermatology has opened up a wide range of opportunities and benefits for treating skin conditions. Particularly helpful today for people with limited access to specialised care is teledermatology. In many locations where it would not have been practicable otherwise, it enabled quick skin cancer screening.

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