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Given the new normal post COVID-19, what changes do you see in dermatology services over the next 5 years? - Synopsis

Introduction:

COVID-19 has increased the use of teleconsultations and artificial intelligence (AI) and reduced dermatological surgery. I shall discuss how these will continue to change dermatology services over the next five years.

Telemedicine:

We have seen more remote consultations since the pandemic started. Telemedicine has helped to maintain continuity and increase efficiency of care whilst maximising patient and healthcare worker safety (1). It has also improved patient satisfaction since patients can now have a quick telephone or video appointment during their working day.

'Teledermatology' has been around for some time before the pandemic but has only just emerged in primary care, with GPs now sending photos of skin lesions to dermatologists and receiving prompt responses under new trust 'Advice and Guidance' request pathways where dermatologists would reply to GPs within 48 hours (2).

However, one drawback of teledermatology is that photos of skin lesions would be of reduced quality than seeing patients' skin face-to-face, which could increase misdiagnoses and reduce efficiency of care. Misdiagnoses are more common in patients of coloured skin due to knowledge gaps which are only just being narrowed.

Another drawback is only being able to inspect and not palpate photos. There are also privacy and data protection issues with patient images since GPs have been transferring them via generic email addresses and mobile text messages (3). Departments need to develop secure pathways for image transfer if teledermatology will stay long-term.

As we recover from the pandemic, it is important that we investigate teledermatology services to find out which patient groups it is useful for whilst ensuring that it is safe, efficient and easy to use.

Artificial intelligence and machine learning in dermatology:

Artificial intelligence (AI) can assist clinicians to improve decision making with more healthcare data being available and rapid development of big data analysis (4). Research shows machine learning (ML) detects skin cancer most accurately (5). Whilst some commercially-developed applications that claim to detect early skin cancer using ML have shown promising accuracy, their false positive rates exceed 10%. This can make patients with benign moles worried that they have cancer, thus these apps may do more harm than good if not backed up by clinician oversight.

As AI and ML use in dermatology will only increase over the next 5 years it is important that it is used well to preserve doctor-patient integrity and minimise patient anxiety.

The surgical aspect of dermatology:

The pandemic has impacted dermatological surgery through teleconsultations and also a change in surgical technique, with the increased use of dissolvable sutures reducing the number of patients needing to return to theatre (and hospital) during the pandemic (6).

The worldwide cancellation of elective surgeries during the first wave increased the risk of tumorigenesis for cancer patients, so the Society of Surgical Oncology created risk assessment resources for the surgical management of cancers on a case-by-case basis. Since patients with lower-grade or metastatic melanomas could not have surgery during this time, they may have undergone alternative cancer treatments such as chemotherapy and radiotherapy. During the next 5 years, we may see an increase and plateau of these treatment forms as well as further development of technology that may enable surgeons and theatre staff to scrub in remotely and extend services to hard-to-reach populations (7).

Conclusion:

The use of telemedicine and AI will continue over the next 5 years as we recover from the pandemic. Whilst 2020 has shown their possible use in dermatology, it is now important for us to learn when they will be appropriate and how we can balance patient care to ensure that it is accurate, efficient, safe and user-friendly.

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