LETTERS TO THE EDITOR

Reply: "Preliminary Results of DERMATEL: Prospective Randomized Study Comparing Synchronous and Asynchronous Modalities of Teledermatology"

B Hernández-Machín[a] and J Suárez-Hernández[b]

[a]Servicio de Dermatología, Hospital Nuestra Señora de los Reyes, El Hierro, Spain
[b]Servicio de Dermatología, Hospital Nuestra Señora de la Candelaria, Tenerife, Spain

To the Editor:

We have carefully read the article published by Romero et al[1] on the preliminary results of the DERMATEL study comparing synchronous and asynchronous teledermatology and would like to congratulate these authors on their work.

Similar to other published studies,[2,3] the authors obtained high diagnostic accuracy with teledermatology, in both the store-and-forward and real-time modalities. However, teledermatology continues to present a series of problems in comparison with conventional dermatology consultation, for instance, longer times and greater costs with less effectiveness. For the time being, this prevents teledermatology from being implemented in Spain and other countries such as the United Kingdom,[4] despite a number of pilot projects, research studies, and economic assessments of this technology.[5]

We would like to report our experience: in 1999 and 2001 we did a pilot project involving teledermatology between a county hospital on the island of El Hierro and a referral hospital on the island of Tenerife. The project consisted of both real-time (1999) and store-and-forward (2001) consultations. The first part of the study (real-time teledermatology) was qualitatively assessed with regard to the quality of information exchange and the satisfaction of patients, relatives, and professionals.[6] The study showed that teledermatology was well accepted by patients and had a resolution capacity of 80 % for real-time consultations, but only 43 % for store-and-forward teledermatology. An economic assessment of the first 72 real-time teledermatology consultations in 1999 was also done. Resource utilization for each consultation was assigned using a cost model based on the activities described in the respective protocols (activity-based costing). It was estimated that conventional dermatology was less expensive (yearly costs: 12 445.71 euros for conventional dermatology vs 16 222.86 for real-time teledermatology) and more effective than real-time teledermatology (per-patient cost: 33.18 euros and 48.42 euros, respectively). Hence, teledermatology could be a health care alternative as it was well accepted by patients, despite lower efficacy, effectiveness, and efficiency than face-to-face consultation in our setting at that time.

Since that time, conventional dermatology consultations have been held twice monthly on the island of El Hierro, using store-and-forward teledermatology on occasions for follow-up when assessment of patients was necessary less than 15 days after diagnosis and to assess emergency patients (as a support before deciding on air travel from the island of El Hierro to Tenerife).

Larger studies on practical results at the clinic are needed, for instance, on the number of referrals, cost-effectiveness,[5] acceptance by patients (anxiety and concerns, physician interaction, quality of life, assessment of other lesions, etc) and by professionals.[7] We agree with Romero et al[1] that greater accessibility would not offset lower quality of care in countries such as ours that have excellent transportation infrastructure. Thus, if routine implementation of teledermatology is not justified in an outlying area accessible only by boat or plane such as the island of El Hierro, it would be hard to justify it in other situations where access to dermatologists does not require air travel and would be considered an option only under special circumstances.

The use of teledermatology allows dermatologists to remain at the forefront, as in other medical specialties, improve the field of dermatology, and use modern telecommunication technologies. However, in addition to the doubtful economic viability, questions remain to be resolved about the ethical and medicolegal considerations regarding the division of responsibilities between the specialist (consultant) and primary care physician (prescriber and provider of treatment).

References

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Generalized Pustular Psoriasis Induced by Tuberculin Testing

J Méndez,[a] I García,[b] G Escudero,[c] M Marcos,[d] A Sánchez,[a] and S Cabrerizo[a]

[a]Sección de Alergología, [b]Servicio de Medicina Preventiva, [c]Servicio de Dermatología, and [d]Servicio de Medicina Interna, Hospital Río Carrión, Palencia, Spain

To the Editor:

We describe a 39-year-old woman with a history of psoriasis who came to the internal medicine department for diminished appetite and weight loss. At that time, she did not present any cutaneous psoriasis lesions. In the tuberculin test requested, after 72 hours the application area on the forearm showed a severe erythematous, pruritic reaction (Figure 1) with the onset of generalized pruriginous papular lesions with predominance on the limbs (Figure 2) and abdominal area that progressed to desquamative pustular lesions within a few days. The patient was referred to the allergology and dermatology departments. She was treated with oral antihistamines for various weeks with no improvement. A skin biopsy was taken and topical corticosteroids were prescribed, which resolved the condition leaving residual hyperpigmentation. A skin biopsy of one of the lesions showed areas of confluent parakeratosis with neutrophil microabscesses, with slight thinning of the underlying epidermis and hypogranulosis, scant presence of neutrophils in the stratum spinosum, and slight spongiosis and exocytosis of lymphocytes. This alternated with areas of orthokeratosis where the epidermis presented a hyperplastic appearance with mild acanthosis, mild spongiosis, and occasional exocytosis of lymphocytes, along with mild perivascular lymphocytic infiltrate in the papillary dermis, with nuclear dust, some macrophages near the basement membrane, and small vessels in the papillary dermis with dilatated lumens and swollen endothelia, and containing some polymorphonuclear cells. No bacilli were observed with the Ziehl–Neelsen technique and no fungal structures were seen with the Grocott technique.

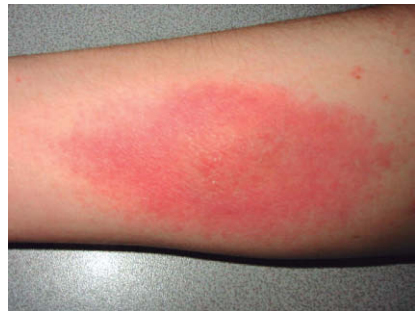

Figure 1. Infiltrated plaque 72 hours after the tuberculin test.

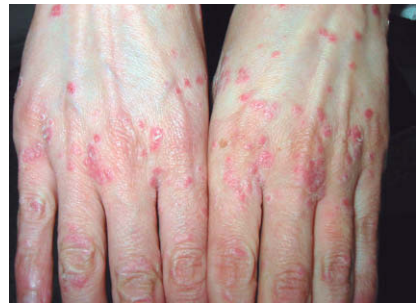

Figure 2. Erythematous-desquamative eruption on the hands.

A pustular eruption can occur in the course of psoriasis. Triggers include infections[1,2] and the use of topical medication.[3,4] More than 30 % of patients with psoriasis have noticed lesions in trauma areas (Koebner phenomenon).[5]

Some patients with psoriasis develop psoriasiform lesions in areas of trauma. The tuberculin test injection could be considered a trauma that could trigger this type of phenomenon. In the literature consulted (MEDLINE), we found only 1 case of Koebner phenomenon in which a psoriatic papule developed after the intradermal injection of tuberculin,[6], but found no reports of generalized pustulosis after the tuberculin test. In addition, the Koebner phenomenon would not explain the appearance of generalized lesions at the same time as the severe reaction to the tuberculin test. One possible explanation for the pustulosis would be miliary tuberculosis, but there are no clinical, analytical, or