COMMENT ON RASMUSSEN ET AL.

A Randomized Controlled Trial Comparing Telemedical and Standard Outpatient Monitoring of Diabetic Foot Ulcers. Diabetes Care 2015;38:1723–1729

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Rasmussen et al. (1) report the results of a Danish randomized controlled trial on the use of telemonitoring (TM) in diabetic foot ulcers (DFUs). They found no statistical differences in terms of wound healing or amputation between two similar groups of DFU patients followed either with TM or with standard care including regular outpatient visits. However, they found a significantly higher rate of mortality in the telemedicine group.

Our diabetology department at Grenoble University Hospital (France) has used TM since 2008 (2). On the basis of this expertise, we conducted a pilot monocentric randomized trial entitled Medico-economical Assessment of Telemedicine During Chronic Diabetes-related Foot Wound Management (AIRPEDIA) that compared the outcome of DFUs exclusively followed by TM versus regular outpatient visits. However, we were forced to stop our trial prematurely (14 inclusions out of the 62 patients scheduled).

First, home nurses in France are private nurses who are not necessarily trained to deal with chronic wounds unlike the nurses in the Danish trial who were supervised by a nurse specialized in ulcer care. This point is essential to the success of telemedicine, as pointed out by Rasmussen et al. (3) in a recently published qualitative study about the implementation of TM in DFUs.

Second, we used an asynchronous method of communication in our model (as in trial performed by Rasmussen et al. [1]), which did not allow us to check the quality of data and pictures on which the clinical judgment was based. Although our protocol allowed an outpatient visit by patients in the TM group at any time, diabetologists did not feel confident enough with the TM system to include more patients. This problem of image quality and the limits to the use of pictures sent by TM was recently stressed in literature (4,5).

Third, the use of additional technologies was time-consuming and technological malfunctions at the beginning of the study slowed down the inclusion process.

Nevertheless, increased mortality did not appear as a potential limitation to the use of TM in our trial probably because we used more restrictive inclusion criteria than Rasmussen et al. (1) with the exclusion of ischemic DFUs that usually have a poorer outcome and are linked to more comorbidities.

Moreover, a secondary objective of the AIRPEDIA trial was to assess the acceptability of TM by patients and private nurses. This evaluation was built on our own validated methods (6) using a questionnaire at the end of the study. On one hand, preliminary results showed that 25% of nurses did not consider themselves "technophilic," and 50% found that taking pictures was time-consuming or that taking suitable pictures was difficult. On the other hand, more than 80% of patients and nurses were very much in favor of TM: "TM improves monitoring the care of the patient."

In conclusion, we suggest that there is a place for TM in DFU care and the care of chronic wounds in general. However, when developing TM solutions, one must keep in mind that these innovative technologies have to be integrated in the stakeholders' routine practice and must be as simple and as fast as possible to use, with adequate initial training and ongoing support. If not, there is a major risk of failure.

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