Diabetic Foot Care Before and During the COVID-19 Epidemic: What Really Matters?

Vilma Urbančič-Rovan

Diabetes Care 2021;44:e27–e28 | https://doi.org/10.2337/dc20-2650

The coronavirus disease 2019 (COVID-19) epidemic reached Europe at the beginning of the year 2020. It posed an enormous toll on people and the economy and had a significant impact on health care systems. Health care delivery had to be modified in order to fulfill the increased demands due to the epidemic and to prevent infection spread.

The first case in Slovenia (2,095,861 inhabitants) was confirmed on 4 March 2020. The COVID-19 epidemic was officially declared on 12 March. All preventative medical activities, including those of foot clinics (foot screening and perfusion pressure measurement) were suspended by a decree of the government and fully resumed only after 15 May 2020. The outpatient foot clinic at University Medical Centre Ljubljana has been running daily without limitations since then (with two full-time and one part-time nurse and one doctor, a consultant diabetologist), in spite of the strong second wave that began in mid-August.

During the lockdown period, the clinic remained open for all foot ulcer patients without signs or symptoms of COVID-19 who have not been in contact with COVID-19 patients. Strict measures to limit infection spread were introduced: precise timing of the appointments, health status questionnaire and body temperature measurement before entering the clinic, and minimum distance of 1.5 m between the chairs in the waiting room. Laboratory tests, imaging procedures, microbiology testing, emergency vascular diagnostic and therapeutic procedures, and emergency surgical procedures were accessible all the time. Telephone and e-mail consultations were introduced to reduce the number of patients attending the clinic.

The comparison between the amount of work done in 2019 and in 2020 is shown in Table 1.

Several reports from foot clinics have been published in the recent months (1,2). The common denominator of all of them is a significantly reduced number of clinic visits and introduction of telemedicine in diabetic foot care. In their "tale of two cities," Shin et al. (1) report a nearly 50% drop in foot clinic visits in Manchester (U.K.) (population over 3 million) and nearly 70% drop in Los Angeles (U.S.) (population of about 10 million) after lockdown. The number of clinic visits at the outpatient foot clinic at Ljubljana University Medical Centre (catchment area of 400,000 inhabitants) in the prelockdown period (January + February) was twice as many per capita as in Manchester and almost three times as many as in Los Angeles. During the lockdown period (March + April), the total number of clinic visits dropped by 58%, mainly due to a significant reduction in foot screening, but also foot ulcer visits and emergency visits dropped by 42% and 34%, respectively. In the following months, the numbers went up; the number of foot screenings in August 2020 was more than double that in August 2019. Still, except for foot ulcer and emergency visits, the 2019 figures were not reached.

Patients with loss of protective sensation are at risk for foot ulceration and may neglect the warning signs of ulcer and infection. Regular foot screening plays a significant role in ulcer prevention, and good access to the foot clinics is essential for efficient wound healing and limb salvage. Lockdown of foot clinics with complete suspension of preventative and partial suspension of curative activities may lead to unforeseen long-term consequences—increased number of complicated foot ulcers and higher amputation rate.

The COVID-19 pandemic is a big challenge for health care systems worldwide. New solutions had to be found almost overnight and a lot of creativity was necessary. Guidelines on COVID-19 and diabetic foot disease by the International Working Group on the Diabetic Foot (3) were not available at the outbreak of

Department of Endocrinology, Diabetes and Metabolic Diseases, University Medical Centre, and Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

Corresponding author: Vilma Urbančič-Rovan, vilma.urbancic@kclj.si or vilma.urbancic-rovan@mf.uni-lj.si

Received 26 October 2020 and accepted 5 November 2020

This article is part of a special article collection available at https://care.diabetesjournals.org/collection/diabetes-and-COVID19.

Table 1—Activities of the foot clinic in 2019 and 2020

	2019, *N*/month	2020,* *N*/month				2019, total *N*	2020, total *N*	
	Jan-Dec	Jan-Feb	Mar-Apr	May-Jun	Jul-Aug	Jan-Aug	Jan-Aug	2020/2019
Clinic visits	468	522	221	395	312	3,499	2,898	0.83
Foot screening	234	278	68	195	95	1,684	1,270	0.75
Ankle/brachial index	88	77	19	66	41	662	403	0.61
Foot ulcer	274	283	164	243	269	2,119	1,918	0.91
Wound swab	22	13	7	12	16	180	94	0.52
Emergency	67	59	39	60	57	506	427	0.84

*Lockdown period: 12 March–5 May.

the epidemic. We had to overcome several barriers: as public transport was not operating, many patients had difficulties getting to the clinic, and some of them skipped the scheduled visits because of fear of infection. However, we have kept active: telephone and e-mail consultations for patients and primary care physicians were introduced, and we aimed for good responsiveness and encouraged the patients to contact us immediately in case of foot problems. All team members followed the preventative measures strictly and did their best to create a calm, positive atmosphere without unnecessary panic at the clinic. No infection spread from outside was recorded. Our approach was well appreciated by the patients.

Undoubtedly, the COVID-19 epidemic will lead to significant irreversible changes in diabetic foot care delivery (4).

Acknowledgments. The author thanks nurses Mira Slak and Maja Garbas for their dedication and enthusiasm at the foot clinic and for collecting the data and acknowledges the encouragement and inspiring comments of Prof. Andrew Boulton (University of Manchester, and Manchester Royal Infirmary, Manchester, U.K.).

Duality of Interest. No potential conflicts of interest relevant to this article were reported.

Author Contributions. V.U.-R. conceived the analysis and wrote the manuscript. V.U.-R. is the guarantor of this work and, as such, had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Prior Presentation. Parts of this study were presented in abstract form and as a poster at the virtual meeting of the Diabetic Foot Study Group, 18–19 September 2020.

References

1. Shin L, Bowling FL, Armstrong DG, Boulton AJM. Saving the diabetic foot during the COVID-19 pandemic: a tale of two cities. Diabetes Care 2020;43:1704–1709

2. Liu C, You J, Zhu W, et al. The COVID-19 outbreak negatively affects the delivery of care for patients with diabetic foot ulcers. Diabetes Care 2020;43:e125–e126

3. IWGDF Guidelines. COVID-19 and diabetic foot disease. Accessed 11 October 2020. Available from https://iwgdfguidelines.org/COVID-19/

4. Najafi B. Post the pandemic: how will COVID-19 transform diabetic foot disease management? J Diabetes Sci Technol 2020; 14:764–766