LETTER



Impact of COVID-19 outbreak on dermatology services: Dermatology in isolation

Dear Editor,

The current pandemic of COVID-19 demanded fast reorganization, as well as the necessity to adapt existing and administered extraordinary working protocols of dermatological services worldwide.¹ We present a unique experience from Republic of Macedonia where an abrupt interruption of the dermatology service on a national level, and the COVID-19 outbreak, occurred simultaneously, with a significant impact on the quality of care.

The fourth diagnosed case of COVID-19 in the Republic of Macedonia was a dermatologist employed at the University Clinic for Dermatology in Skopje, the only tertiary care hospital in the country. Prior to being diagnosed, the doctor made direct contact with nearly all medical and non-medical personnel of the Clinic. The doctor also held a previously scheduled seminar, which was attended by an additional 95 dermatologists and dermatology residents from across the country.

In the first hours following the diagnosis, rapid action was taken by government officials, and 128 dermatologists and dermatology residents were put in home quarantine for 14 days. Only 9 dermatologists in secondary care could resume practice in the period from 9 March 2020 to 26 March 2020, unevenly distributed geographically and in terms of subspecialty.

At the same time, a number of socially restrictive measures were implemented, further reducing the availability of the dermatological services.

The Macedonian dermatological body reacted with notable initiative and self-organization. In the absence of an official teledermatology platform, commonly used social media platforms and conventional telecommunications were used to sustain communication with other specialties and patients. As a result, the management of the majority of chronic patients proceeded without interruption.

In an effort to discover which of the dermatological conditions demanded immediate attention, we conducted a survey where we asked colleagues about the number and reasons for teledermatological consults.

Overall, 77 dermatologists participated in the survey. Ninety-one percent of respondents had received requests for consultations by patients. Eighty-two percent felt that consultation via a communication application was useful for patient follow-up; however, these methods were appropriate in less than 30% of cases for initial consultations.

The most common motives for consultations with patients were therapy follow-ups, acute exacerbations of chronic diseases, and deficiencies of certain medications due to difficulties in drug importations. Most frequently, dermatology input was requested from general practitioners (GPs) and pediatrics (Table 1).

The dermatologists, who were not subject to the home isolation measure, held 163 outpatient examinations, in the majority of which pediatric dermatological pathology dominated (Table 2).

A total of 11 patients were admitted during this period in a secondary care hospital; the most frequent admissions were for bullous dermatoses and cutaneous infections (Table 2).

Korting, Hammerschmidt, and Miovski constituted the initial development of the University Clinic for Dermatology in 1947, as part of the Medical Faculty in Skopje,² with the treatment of the vast number of patients with skin infections as its main purpose.^{3,4} Since then,

TABLE 1 Most common dermatological input by specialty and by reason

Specialties which asked for dermatological consult	Common reasons for patient consultation
GPs (43) Pediatrics (23) Infectious disease (4) OBGYN (4) Hematology (2) Rheumatology (2) Plastic surgery (1)	Treatment modifications (pemphigus, AD, pemphigoid, psoriasis, acne) Acute exacerbations of chronic diseases (AD, acne, psoriasis, pemphigus) Patient education (AD, contact dermatitis) Initial consultation (skin trauma, contact dermatitis, drug reactions) Deficiencies of medications (retinoids, dapsone, antimalarials)

TABLE 2	Undelayable visits and admissions in 2 weeks period
---------	---

Outpatient visits N = 163	Primary reason for admission to hospital N = 11
Pediatric (<18 years) Atopic dermatitis (54) Diaper dermatitis (13) Acne (11) Skin infections (9) Drug rash (8) Other (12) Adult patients Drug rash (16) Dermatoses in pregnancy (6) Acne (6) Esthetic procedures (6) Other (22)	 Skin and soft tissue infections Erysipelas Diabetic foot Chronic venous ulcersPemphigus Bullous pemphigoid Psoriasis Stevens-Johnson syndrome Toxic epidermal necrolysis Melanoma, surgical treatment Pyoderma gangrenosum

the dermatological services on the national level have continued to develop and have not once ceased work, not even during the events of the great 1963 Skopje earthquake.

Dermatology is largely considered a nonacute, outpatientcentered specialty, with a continued reduction in dedicated dermatology beds.^{5,6} Our survey contributes by presenting the dermatoses, which demanded dermatological consult and which were a diagnostic and therapeutic challenge to the GPs and other specialties. These included pediatric dermatoses, dermatoses of pregnancy, patients with perennial retinoid therapy, bullous dermatoses, and cases of drug eruptions, including SJS and TEN. This is deducted from a 14-day period and concerned a population of a little over 2 million.

Pediatric dermatoses constitute roughly 50% of both urgent visits and telecommunication consultations. The present results are broadly in line with those of previous studies,⁷ confirming the role of the dermatologist in the pediatric care.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

Katerina Damevska¹ Lence Neloska² Viktor Simeonovski¹ Andrej Petrov^{3,4} Irena Dimitrovska⁵ Natasa Teovska-Mitrevska⁶ Anita Najdova¹ Nora Pollozhani¹

¹University Clinic for Dermatology, Faculty of Medicine, "Ss. Cyril and Methodius" University, Skopje, Republic of Macedonia ²Polyclinic "Gjorche Petrov," PHI Health Center-Skopje, Skopje, Republic of Macedonia

³Acibadem Sistina Hospital, Skopje, Republic of Macedonia ⁴Faculty of Medical Sciences, University "Goce Delchev"-Shtip, Shtip, Republic of Macedonia

⁵Department of Dermatology, City General Hospital "8th of September", Skopje, Republic of Macedonia ⁶Dermatology Department, "Re-Medika" General Hospital, Skopje, Republic of Macedonia

Correspondence

Viktor Simeonovski, University Clinic for Dermatology, Faculty of Medicine, "Ss Cyril and Methodius" University, Ul. Majka Tereza 31, 1000 Skopje, Republic of Macedonia. Email: viktor93@gmail.com

[Correction added on 2 July, after first online publication: The authors' surnames and given names were inverted in the original publication. They have been corrected.]

ORCID

Katerina Damevska D https://orcid.org/0000-0003-4745-3747 Viktor Simeonovski D https://orcid.org/0000-0003-2956-0928 Natasa Teovska-Mitrevska https://orcid.org/0000-0003-2009-3833

REFERENCES

- Alpalhão M, Filipe P. Inpatient care for dermatological patients during SARS-CoV-2 - a case report from Portugal. *Int J Dermatol.* 2020;59(6): e195. https://doi.org/10.1111/ijd.14913. [Epub ahead of print].
- Donev D. The First 15 Macedonian Doyens at the Faculty of Medicine in Skopje. 1st ed. Skopje, R. Macedonia: Faculty of Medicine, University Ss Cyril and Methodius in Skopje; 2017:1-192.
- Hammerschmidt EE, Korting GW. Ulcerative tuberculoides. Br J Dermatol Syph. 1950;62(9):361-364.
- Miovski D, Korting G. Experimental studies of endogenous factors in cutaneous fungoid infection. Srp Arh Celok Lek. 1950; 48(6):393-401.
- Esdaile B, Lally A, Ratnavel R. The need for dedicated dermatology beds. *Clin Med.* 2011;11(3):300-301.
- Eedy DJ, Griffiths CE, Chalmers RJ, et al. Care of patients with psoriasis: an audit of U.K. services in secondary care. Br J Dermatol. 2009; 160(3):557-564.
- Peñate Y, Borrego L, Hernández N, Islas D. Pediatric dermatology consultations: a retrospective analysis of inpatient consultations referred to the dermatology service. *Pediatr Dermatol.* 2012;29(1): 115-118.