

Skin Prick Test Practice In Allergy Clinics During Covid-19 Pandemic

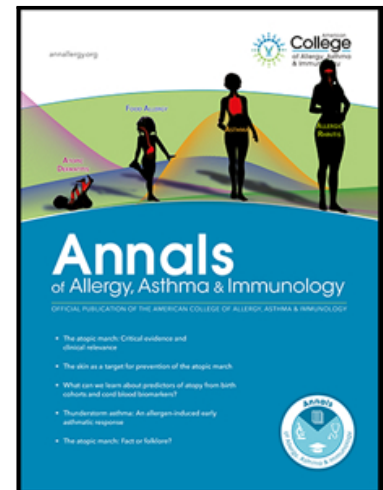
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PII: S1081-1206(21)00349-5
DOI: <https://doi.org/10.1016/j.anai.2021.05.002>
Reference: ANAI 3594

To appear in: *Annals of Allergy, Asthma Immunology*

Received date: 6 February 2021
Revised date: 13 April 2021
Accepted date: 3 May 2021

Please cite this article as: Resat Kendirlihan MD , Pamir Cerci MD , Dilsad Mungan MD, Prof , Skin Prick Test Practice In Allergy Clinics During Covid-19 Pandemic, *Annals of Allergy, Asthma Immunology* (2021), doi: <https://doi.org/10.1016/j.anai.2021.05.002>



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Skin Prick Test Practice In Allergy Clinics During Covid-19 Pandemic

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Short Running Title: Skin Prick Test Practice During Covid-19 Pandemic

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987 text; 7 references; 1 figure

Key Words: Allergy diagnosis, COVID-19, Epidemiology, Skin Prick Test

Abbreviations: SPT; Skin Prick Test, WHO; World Health Organization, CDC; Centers for Disease Control and Prevention, PPE; Personal protective equipment

Acknowledgments

We thank all study participants for their voluntary participation.

Conflict of Interest

The authors have no conflicts of interest to declare.

Funding Sources

The authors received no funding for this manuscript.

Author Contributions

D.M. made substantial contributions to this work's design; R.K., P.C., D.M. drafted and revised this work critically for important intellectual content.

Skin prick test (SPT) is a vital tool to confirm sensitization in allergic diseases, making it a daily routine for allergists. Although SPT is not considered an aerosol-generating procedure, the close contact between the patient and the performer may pose a risk for transmitting the disease.¹ For Turkish healthcare facilities, the first phase of the COVID-19 pandemic started with identifying the first case and continued by a quarantine period (QP), declared at the end of March 2020. At the beginning of June 2020, the Turkish government initiated the second period and named it the “normalization period” (NP).² We aimed to compare the situation and behavior of allergists between the two phases of the COVID-19 pandemic.

The present study is an online survey-based cross-sectional study conducted between June 20, 2020, and June 28, 2020. Participants were recruited through e-mails and WhatsApp. To our knowledge, this survey presents the first data of allergists' approaches to performing SPTs during the COVID-19 pandemic. The healthcare system in Turkey is mainly socialized. Turkey is administratively divided into 81 provinces, but only 33 have at least one allergist working. The survey was sent to nearly 300 allergists, and 128 responded by filling the questionnaire so we believe this study's results are sufficient to represent our country. The participants were from 28 different provinces in Turkey. Fifty-five of the respondents (43%) were pediatric allergists. In the QP, nearly half of the participants had to shut down the SPT laboratories and one-third of them had to work in pandemic outpatient clinics. The ratio of participants who continued to perform SPTs in the QP was 54%. Of all the participants, 16% stated that their prick test laboratories were moved to a different place in their hospital. In the QP, 60% of the participants stated that they were very concerned about the risk of transmission during SPT. Despite wearing masks, 60% of the participants were anxious about being face-to-face with a patient for 15

minutes. Hospital and personal phones were the most preferred methods of telecommunication. Forty-three percent of the participants preferred to perform all SPTs by appointment, 36% suggested a partial appointment system, whereas 21% did not consider it necessary to have an appointment system. Ninety (71%) participants considered that the test intervals should be at least 30 minutes. When asked about the diagnostic value of the SPT for the treatment of allergy during the pandemic, 29% answered SPT to be very important, while 51% of the participants considered it of moderate importance. Seventy-six (60%) of the participants stated that they would prefer to order specific IgE tests more than they usually do. Eighty-seven participants said they would prioritize testing with venom, 71 with food allergens, and 49 with latex (Figure 1). Priority given to food allergens was 65% among pediatric allergists and 34% among adult allergists. With the transition to the NP, the ratio of participants who had high anxiety about performing an SPT decreased from 60% to 30%.

The European COVID-19 outbreak position document recommends that SPT should be generally suspended or replaced by laboratory tests during the pandemic except for some individual cases.¹ In our questionnaire, most participants, attributed importance to venom allergy; and especially pediatric allergy specialists gave more priority to food allergens by stating that they would continue to perform skin prick tests with these allergens despite the pandemic. Due to these allergies' urgent nature, we consider this result an excellent and practical example of a careful risk-benefit assessment, which EAACI/ARIA has mentioned.¹ More than half of the participants preferred to perform an SPT at least thirty days after a patient's treatment of COVID-19 is completed. In other words, participants did not want to test even if the official quarantine period was over.

One consequence of the pandemic is the increased exposure to disinfectants. American Nurses' study showed that poor asthma control was associated with exposure to formaldehyde, hypochlorite bleach, and hydrogen peroxide but not with exposure to alcohol-based disinfectants.³ Most participants chose chlorine-containing disinfectants for the floors and alcohol-based for the surfaces of seats and desks. We consider this result to be according to the Centers for Disease Control and Prevention's (CDC) recommendations that advise patients to choose disinfectants that are less likely to cause an asthma attack, such as products with ethanol (ethyl alcohol).⁴

We found that only one-third of the participants had a written action plan. This low result is likely to be related to the fact that the survey was conducted at the beginning of the pandemic for our country. The World Health Organization (WHO) shares daily information on the number of coronavirus cases for countries.⁵ Following this information may help adjust allergy clinics by predicting the pandemic course in the upcoming time. Basic Reproductive Rate (R_0) is the average number of people infected by one person in a susceptible population.⁶ For Turkey, R_0 was below 1 in the NP, and we showed in our study that physicians felt less anxious when performing an SPT during this period. An implication of our result to clinical practice may be the possibility of approaching SPTs according to the R_0 ratio. In this sense, an R_0 ratio below 1 may refer to continuing normal operations. In contrast, an R_0 ratio above one may refer to postponing SPTs similar to the stratified approach mentioned by Shaker et al. in a special article about pandemic contingency planning for allergy clinics.⁷

Our suggestions; since it would not be practical to suspend all SPTs for long periods, the decision about prioritization of testing should be made carefully. For instance, SPT with venom

and food extracts may be done more urgently than others. Proper measures such as universal masking and effective triage to create a safer environment are needed. Performing SPTs by appointment would be reasonable. This study's primary limitation is the lack of effective sustainable or verified data backing up our findings. Therefore, we suggest that further studies are needed to validate our recommendations.

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Figure 1. The respondents' answers to the 'Please select your timing preference for performing a skin prick test regarding allergens during the pandemic.' The top priority was attributed to the venom allergen (n=87), followed by food allergens (n=71) and latex (n=49).

