Cite this as: Denis KUZNETSOV, Oleg KALYUZHIN, Andrey MIRONOV, Valery NESCHISLIAEV, Anastasiia KUZNETSOVA. A case of vitiligo after COVID-19 vaccination: a possible role of thymic dysfunction[J]. Journal of Zhejiang University Science B, 2023, 24(12): 1141-1150.
http://doi.org/10.1631/jzus.B2300025

A case of vitiligo after COVID-19 vaccination: a possible role of thymic dysfunction

Key words: COVID-19 vaccination; Vitiligo; Autoimmunity; Thymus; T cells

Research Summary

This article focuses on a case of vitiligo following COVID19 vaccination and describes the possible mechanism of this autoimmune skin lesion:

- **Link 1. Effects of trauma, stress, depression, acute and chronic infection, vaccination, cytostatics, age-related involution of the thymus.**
- **Link 2. Limitation of alternative mRNA splicing in the thymus leads to a "vulnerability" in the negative selection system.**
- **Link 3. Disruption of negative selection of autoreactive cells during T-cell maturation in the thymus and their migration to the periphery under the influence of negative factors.**
- **Link 4. Melanocyte oxidative stress triggers an immune attack.**

JAUS-B

Innovation points

- **Introduction** of a new understanding of the mechanisms of autoimmune lesions after vaccination

- **Summary** of the obtained experimental data and their discussion in the context of clinical practice.

- **Emphasis** on the existence of a single mechanism of autoimmune complications after vaccination in which thymus dysfunction plays a critical role.

