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Letter to the Editor

Latencies of three or five Months between COVID-19 and Acute, Iris Depigmentation Argue against Causality

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With interest we read the article by Soydan *et al.* on two patients with bilateral, acute depigmentation of the iris (BADI), two respectively five months after a SARS-CoV-2 infection^[1]. The study is compelling, but has limitations.

We disagree with the notion that BADI was due to SARS-CoV-2 infection^[1]. The strongest argument against a causal relation is the long latency of two (patient-1) respectively five months (patient-2) between the SARS-CoV-2 infection and BADI onset^[1]. Another argument against a causal relation is that SARS-CoV-related BADI was only reported in two other cases^[2, 3]. Almost 800 million people were infected by the end of March 2023, according to the WHO (COVID-19) dashboard^[4]. If SARS-CoV-2 is really responsible for BADI, its prevalence should be higher given the millions infected. In the case reported by Niedzwiecka *et al.*, a 55yo female, BADI developed one month after SARS-CoV-2 infection^[2]. Ophthalmologic manifestations in addition to BADI in this patient included only pigment deposition in the corneal epithelium^[2]. In the case reported by Yagci *et al.*, a 44-year-old female, the latency between onset of COVID-19 and onset of BADI was at least one month^[3]. Additional ophthalmologic manifestations were pigment deposition in the corneal epithelium, pigment dispersion in the anterior chamber, posterior synechiae, and increased intra-ocular pressure^[3].

Differential causes of BADI that have to be ruled out before blaming SARS-CoV-2 for BADI include herpetic iridocyclitis, pigment dispersion syndrome (PDS), pseudo-exfoliation syndrome, Fuchs uveitis syndrome, Vogt-Koyanagi-Harada disease, trauma, fluoroquinolone antibiotics, pitcher plant extract, insecticides, fumigation therapy, and acute angle-closure glaucoma. Of these, several were not considered as differential diagnoses of SARS-CoV-2-related BADI. Did either patient receive antibiotics prior to onset of BADI?

Overall, a latency of two respectively five months between SARS-CoV-2 infection and BADI speaks against a causal relationship. All differentials need to be ruled out before diagnosing SARS-CoV-2-related BADI.

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Compliance with Ethics Guidelines: This article is based on previously conducted studies and does not contain any new studies with human participants or animals performed by any of the authors.

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