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LETTER TO THE EDITOR

Tracking awareness for Kawasaki disease in children related to the COVID-19 pandemic

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Dear Editor,

With great contentment, we have read "COVID-19 and Kawasaki disease: an analysis using Google Trends" published by Dey and Zhao [1]. Indeed, at that time, interest in Kawasaki disease was at a high level.

Kawasaki disease, first described by Tomisaku Kawasaki in 1967, is an acute systemic vasculitis in young children. This disease's etiology is unknown, but it is believed that an infectious agent and a genetic predisposition are involved [2]. The disease is relatively rare with different incidences between ethnic groups, with higher rates in children of Asian descent [2, 3]. Known common characteristic symptoms of Kawasaki disease are fever, conjunctivitis, and erythema [2].

Jones et al. report a possible association of COVID-19 with Kawasaki disease [4]. In their case report, Waltuch et al. mention the similarity of a COVID-19 post-infectious cytokine release syndrome to Kawasaki disease [5]. It is generally suggested that COVID-19 is mostly mild in children [4]. However, there seem to be cases where SARS-CoV-2 infection in children could trigger Kawasaki disease, and severe disease courses have been reported [6–8].

As a result, despite the comparatively small number of cases, the mass media's information has led to the population being alerted, especially since the COVID-19 pandemic has already sensitized them and particularly vulnerable children are affected [9].

Dey and Zhao reported interest in several keywords related to Kawasaki disease and COVID-19 collected from Google Trends. They stated that this trend has not yet peaked and probably is caused by pediatric manifestation in France, Switzerland, and Italy.

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However, now, we can see that reality was different. Dey and Zhao conducted a search by setting Google Trends on 14 May. They are supposed to receive data up to 12 May, at maximum. Their data do not cover an immediate decrease of interest in Kawasaki disease after 15 May.

Figure 1 presents a timeline with relative search volumes for a search topic (Kawasaki disease syndrome). This setting compares all keywords in all geographical locations where Google operates. In Fig. 1, we see four peaks related to interest in Kawasaki disease worldwide. The highest peak on 29 April is most probably caused by the tweet from the UK Paediatric Critical Care Society (PICS) (https://twitter.com/PICSociety/status/1254508725227982848). Society asked to retweet and got around 4.2k retweets [accessed: 19 November 2020]. The tweet was published on 26 April, and this caused a massive number of media publications worldwide, thus highest interest in the topic.

The next peak on 6 May is ripples effect from publication in Time.com, which refers to Jones et al. paper and PICS's previous statement (https://time.com/5832461/kawasaki-disease-covid-19/). On 9 May, US newspapers reported that three children died because of Kawasaki disease.

The last peak on 15 May is caused by joint announcements by WHO and ECDC on Kawasaki disease and mention Verdoni et al. paper on Kawasaki-like disease in Italy published in the Lancet [10]. After this last peak, interest in this topic shown by Google Trends decreased immediately. There is no significant correlation between Kawasaki disease and coronavirus interest expressed in Google trends ($r = -0.05$, p value $< .001$). It is clear that interest was caused by online publications in the UK and US online newspapers. The first report by Jones et al., published on 7 April, did not get public attention.

Despite the still small number of children affected by Kawasaki disease, the population's reaction was very fast and high, which is reflected in the increased search interest from the end of April up to the middle of May.

Information transported by media and reached the population could generate a high level of interest, e.g., information

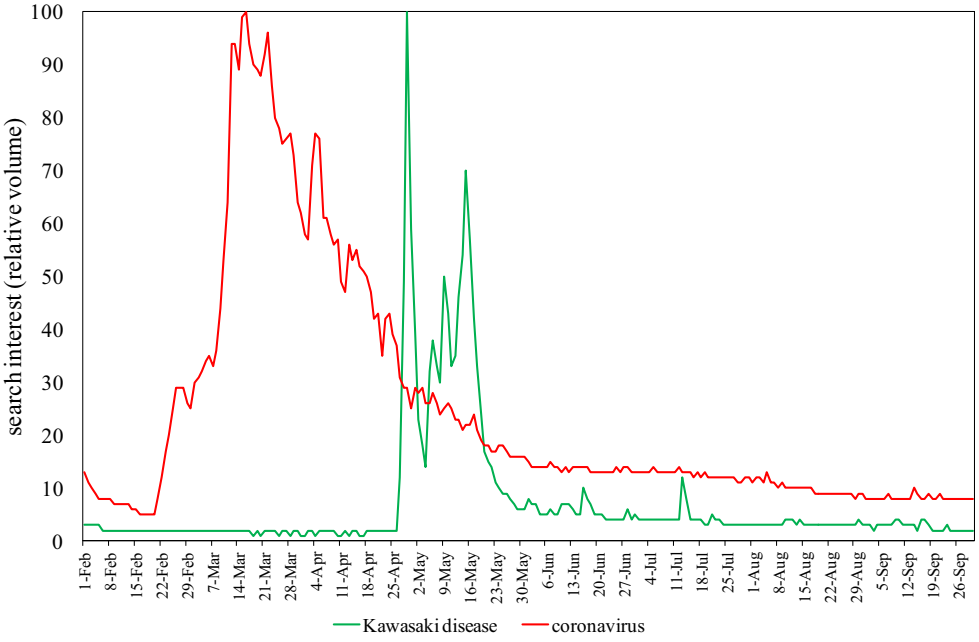

Fig. 1 Display of Google Trends data for worldwide search topics on Kawasaki disease and coronavirus. Normalized search data were obtained from Google Trends (100—high interest; 0—no or insufficient interest data) from 1 February to 30 September 2020 [accessed: 19 November 2020]

needs about coronavirus SARS-Cov-2 or the symptoms associated with COVID-19 and highest levels of attention, e.g., for search topic "Kawasaki disease".

Compliance with ethical standards

Disclosures None.

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