

Mimics and chameleons of COVID-19

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Mimics are conditions closely resembling a very distant entity, a typical example being unilateral weakness due to hypoglycaemia mimicking stroke. On the other hand, chameleons are animals blending in with backgrounds, occasionally changing colour in order not to be recognised. Chameleons in medicine are conditions often overlooked and mistaken for the background condition. To understand the new and sometimes puzzling clinical presentations emerging in the current COVID-19 pandemic, it is important to have at hand concepts such as “mimics and chameleons”.

An 83-year-old patient was transferred to our emergency department after a fall. As he sustained thoracic trauma, computed tomography (CT) of his chest was performed, revealing bilateral, subpleural, ground-glass opacities with air bronchograms. The patient was afebrile and did not have a cough. Fortunately, he was immediately diagnosed with COVID-19 and admitted.

The first COVID-19 case in Basel, Switzerland was reported on 25 February 2020, just few days after the first Italian case. Therefore, our experience with this new disease is short and we need to learn from such cases. Recently, it was shown that abnormal lung CT findings can be present in “asymptomatic” patients suffering from COVID-19 [1]. In fact, such findings were made even before viral RNA was detectable [2]. This may be explained by the recent recognition that current tests lack sensitivity, and infections may therefore be missed [3].

On top of the issue concerning the sensitivity of tests, we are now facing the issue of the sensitivity of clinical features, which is the cornerstone of all considerations regarding testing and isolation. At this very moment, we are treating three patients who suffer from severe COVID-19 and were asymptomatic at presentation. Therefore, we are in need of a new framework and new definitions for this group of patients, who are older and tend to present with nonspecific symptoms, such as weakness and fatigue [4]. These clinical presentations could be named “COVID-19 chameleons” in analogy to the concept of “stroke chameleons”, encompassing presentations that do not appear to represent a stroke initially, but later turn out to be an acute stroke [5]. Differential diagnosis in older patients with “everything and nothing” should include “COVID-19 chameleon”, as – based on our observations – this is not an isolated case. Of note, “COVID-19 chameleons” do not

appear to be limited to frail older patients, but may also affect younger patients.

Another patient was an 80-year-old woman living in a residential care home who presented to the emergency department with dyspnoea and cough. The referring primary care physician suspected COVID-19 since two other residents in her home were already diagnosed. After extensive work-up, decompensated heart failure was the most likely cause of diffuse lung infiltrates, nasal and pharyngeal swabs were twice negative for SARS CoV2. This second case could be named “COVID-19 mimic” in analogy to “stroke mimics”, which are manifestations of nonvascular disease presenting with a stroke-like clinical picture [5].

As the numbers of coronavirus infections are exponentially rising, there is an urgent need to devise and test a management protocol for (older) patients with “specific” and “nonspecific” complaints in order to provide optimal patient care, efficient use of resources and protection of proxies.

It is known that certain healthcare systems have seen exponential growth in COVID-19 cases, while others were able to retain a linear growth pattern. Case recognition using clinical skills and early isolation is one of the cornerstones in the fight against the pandemic, but testing is another. Therefore, this article underlines the need for extensive testing [6]. It shows that the present policy of many government bodies to focus on patients at risk with specific symptoms is also limited by “chameleons”, such as patients with nonspecific symptoms. As the true denominator is unknown [7], extending testing to patients presenting with possible COVID-19 mimics or chameleons should be considered.

Acknowledgments

We acknowledge and thank the staff of the Emergency Department of the University Hospital Basel, as well as the task force COVID-19 chaired by Werner Kübler, Christoph A. Meier and Manuel Battagay. We thank Andreas Widmer, Sarah Tschudin, Maike Friederich and Florian Rybinski for helpful discussions.

Disclosure statement

No financial support and no other potential conflict of interest relevant to this article was reported.

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