GAVIN PUBLISHERS

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Emergency Medicine Investigations

Gerber B and Hollinger A. Emerg Med Inves 5: 10101.

Case Report

DOI: 10.29011/2475-5605.010101

How COVID-19 Affected a Small Town in Switzerland: A Brief Report from a Swiss Tourist Hotspot

Bernhard Gerber[1], Alexa Hollinger[2*]

[1]Bern West Med AG, Mühledorfstrasse, Bern, Switzerland

[2]Intensive Care Unit, University Hospital Basel, Spitalstrasse, Basel, Switzerland

[*]**Corresponding author:** Alexa Hollinger, Intensive Care Unit, University Hospital Basel, Spitalstrasse 21, 4031 Basel, Switzerland

Citation: Gerber B and Hollinger A (2020) How COVID-19 Affected a Small Town in Switzerland: A Brief Report from a Swiss Tourist Hotspot. Emerg Med Inves 5: 10101. DOI: 10.29011/2475-5605.010101

Received Date: 29 June, 2020; **Accepted Date:** 08 July, 2020; **Published Date:** 13 July, 2020

Summary

The SARS-COV-2 (COVID-19) pandemic was labelled the defining global health crisis of our time by the United Nations Development Programme (UNPD) alongside with enormous negative socio-economic impact. At the beginning of the pandemic in Europe, Switzerland was among the countries with high prevalence of COVID-19. Dramatic upscaling of testing capabilities and facilities is encouraged. This recommendation was implemented by the CEO of a prospering company in a Swiss tourist hotspot in the heart of Switzerland.

Introduction

Based on previous reports [1], estimating and predicting the extent and lethality of the SARS-COV-2 (COVID-19) outbreak, originating in Wuhan/China is ongoingly challenging. Along with the course of this disease this is no longer only reflected by the aforementioned controversial statements and reports [1], but also because there still exists a certain learning curve concerning the interpretation of concurrent symptoms [2], of treatment options [3], as well as of short- and long-term sequelae associated with it [4]. The COVID-19 pandemic was labelled the defining global health crisis of our time by the United Nations Development Programme (UNPD), and as such also bears enormous negative socio-economic impact. On February 25, 2020, the COVID-19 pandemic was confirmed to have spread to Switzerland. Two days thereafter, the Federal Council of Switzerland started banning of social events. Three weeks later, the importance of rapid diagnosis and immediate isolation of cases, rigorous tracking and precautionary self-isolation of close contacts in Switzerland was again emphasized from medical experts [5]. In the beginning of May Switzerland counted 30'000 confirmed cases with a case fatality rate of roughly 5% and a 60:40 male-to-female ratio. Switzerland is one of the most affected countries in the world. Roughly 3.7 million people were tested positive for COVID-19 worldwide, and 260'000 people have died. Two months later, Coronavirus continues to spread across the world, with now close to 13 million confirmed cases in 188 countries and more than 560'000 people who have lost their lives.

Report

In the middle of April 2020, the innovative CEO of a company situated in Interlaken, Switzerland, wanted to know more about the COVID-19 spread among his team after having travelled to China until October 2019 (i.e., roughly two months before the reported outbreak). He was convinced to have been infected with COVID-19 during his travels or even thereafter as he repeatedly had business meetings with people from China. End of February 2020, he travelled to Thailand but without continuing to his trip to South Korea as originally planned. He was sure to unknowingly have spread the virus to his co-workers when many of them became sick revealing a similar clinical picture immediately after he had experienced flu symptoms in January 2020. Therefore he organized the testing of COVID-19 IgG (ELISA method) of all 16 management members of his company on May 1, 2020. A small sample of three additional people was tested as a control group: two live in Interlaken but do not work the mentioned company, as well as the Chairman of the company living outside of the canton of Bern.

Considerable involvement was possible with Interlaken being a tourist hotspot for Chinese travellers. However, in the beginning of April 2020, there were less than 10 people treated in the Regional Hospital in Interlaken. Finally, all people that

underwent serial COVID-19 testing on May 1, 2020, were negative for COVID-19 IgG (Table 1). Average age of the 16 people from the company management was 47 years (49 years average age of all 19 participants). The test used was declared with an estimated specificity above 99% and an estimated sensitivity above 97% three to six weeks after infection with COVID-19, possibly being negative mostly in light cases. So what does this mean, especially in the context of a high number of Chinese tourists in Interlaken until early 2020 and therefore after the virus had already spread through wide parts of China at that time?

Patient #	Age years	Primary value	Confirmatory value	Interpretation
		IgG MOC	IgG MOC	
MANAGEMENT				
1	41	0.3	N/A	Negative
2	27	0.5	N/A	Negative
3	36	0.3	N/A	Negative
4	58	0.2	N/A	Negative
5	52	1.9	<0.2	Negative
6	52	0.6	N/A	Negative
7	44	0.7	N/A	Negative
8	49	0.3	N/A	Negative
9	45	0.4	N/A	Negative
10	41	0.3	N/A	Negative
11	51	0.4	N/A	Negative
12	56	0.4	N/A	Negative
13	61	0.4	N/A	Negative
14	41	0.2	N/A	Negative
15	49	0.7	N/A	Negative
16	41	0.6	N/A	Negative
CONTROL GROUP				
17	59	0.8	0.3	Negative
18	70	1.4	<0.2	Negative
19	65	0.3	N/A	Negative

Table 1: COVID-19 IgG analysis.

Data are displayed numbers or COVID-19 IgG MOC. N/A, not applicable (no confirmatory test needed); MOC, Multiple of Cut-off.

Conclusion

For sure, the residents of Interlaken and surroundings had followed the directory of the Federal Council. Moreover, Switzerland was particularly hit by the virus in the border regions of the country. In addition, our findings challenge the existence of many people with undetected COVID-19 infection in Switzerland [5] to some extent. But the efforts taken until today may thus be considered successful in controlling the spread of COVID-19 until the safe and effective vaccine is available [5] that many among us long for.

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