

Plastic Surgery in the Age of Coronavirus

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The history of the appearance of the 2019 coronavirus disease (COVID-19), which is caused by the virus later renamed severe acute respiratory distress syndrome coronavirus 2 (SARS-CoV-2), is well known by now.¹ It first appeared in the city of Wuhan in China's Hubei province and then quickly spread to the rest of the world. Within 30 days, the virus had thus spread from a single city to the entire country and beyond.

Articles published in international journals, first by Chinese authors, then by others, up to the last week of March, help us to understand the evolution and the causes of this rapid spread.²⁻¹⁶

What has now become apparent is that the novelty of the virus and the possibility of its rapid spread were underestimated.¹⁶⁻¹⁸ Even the first epidemiological studies identified potential scenarios that were later disproved by the data that emerged.^{13, 19-21, 22}

Within a very short time, the World Health Organisation (WHO) put out guidelines that quickly had to be revised following the rapid evolution of the spread of the virus. On January 27, 2020, the WHO declared the COVID-19 outbreak a public health emergency of international concern.²³ The chances of contracting the disease through close proximity to people carrying the virus, even those with mild symptoms, appear to have been grossly underestimated.²⁴⁻²⁶

The ability of the Chinese authorities to build hospital facilities for infected patients within a very short time appeared to be a test of "strength." However, little attention was paid to the conclusions that should have been drawn about how to assist new patients during the emergency situation.²⁷ The political authorities in many countries viewed the lockdown and the complete suspension of all public activities in China as a dictatorial measure that was not based on any real need.

On January 17, 2020, the US Centers for Disease Control and Prevention and the Department of Homeland Security's Customs and Border Protection began health screenings at US airports for passengers returning from

Wuhan City. It took until the end of January for more stringent measures to be implemented, before flights from China were suspended altogether.²⁸

Italy responded in much the same way, by canceling all flights to and from China beginning on February 1, 2020, but without ensuring the necessary precautions for people traveling from China on flights with stopovers in other countries. The option of testing potentially infected patients for the disease appeared to be a far-off measure that was not urgently considered.²⁹ However, the illusions outlined above were drastically shattered by the nature of the virus itself, which spread very rapidly and turned out to be highly contagious.

For Italy, which found itself with the largest number of infections in Europe within a relatively short time, the outbreak soon turned into a crisis of unprecedented proportions.³⁰⁻³² Despite being aware of what might happen, our political and health authorities, like those, it would seem, in much of the world, did not respond quickly enough to what was happening in China and was already publicly known.

The Italian authorities did not realize quickly enough that the virus would require immediate attention and would soon dictate drastic measures in response to a situation that was quickly deteriorating. For instance, as late as February 19, 2020, thousands of people from the city of Bergamo traveled to Milan to watch a Champions League football game. Nevertheless, the Italian government only placed the country under quarantine and ordered serious containment measures after 10 March.

This time, the historical division of our country into a northern part, characterized by greater economic development, and a southern one—which has seen large migrations of its population to the north and abroad due to the lack of local jobs and economic opportunities—was oddly reversed. Lombardy, in particular, one of the richest and most densely populated regions in Europe, has been the most severely affected. On March 11, 2020, the WHO declared COVID-19 a global pandemic, with >118,000 clinical cases and over 4000 deaths in 114 affected countries. To date, as of April 17, 2020, there have been 172,434 cases and 22,745 deaths in Italy, most of them in Lombardy.

Today, precisely through the development of new systems for tracking the spread of the virus, it is possible to monitor the rapid global rise in infections.³⁴ This provides useful data for attempts to counter the evolution of the virus by means of containment measures.

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Most hospitals in northern Italy are overcrowded and approaching the absolute limits of their capacity, and at the same time, there is a lack of drugs, mechanical respirators, oxygen, and personal protective equipment (PPE). The healthcare system is struggling to provide normal services. Military field hospitals have been established in several areas, for example, in Bergamo, an Italian city with a rich history and traditions that is also one of the worst affected.³⁵ Within a few days, even the pavilions of the 2015 Milan World Exposition were partially transformed into a large resuscitation facility for thousands of new patients. This was all made possible, thanks to the generosity of Italian companies and citizens who are donating millions of euros to “rebuild” the Italian healthcare system, a healthcare system which, precisely because it is accessible to everyone without distinction and at no cost, has always been a point of pride for Italy, and which in recent years has been tragically weakened and impoverished due to completely inadequate policy choices and a lack of investment.

Furthermore, commitment to patients is of particular importance, given that the virus primarily targets the lungs. Severe acute respiratory distress syndrome coronavirus 2 (SARS-CoV-2), which results in a high percentage of infected patients, has been enormously difficult to manage. The incidence of mortality appears to be high in elderly people and in those who suffer from comorbidities, such as hypertension, obesity, diabetes, or other pathologies, but there is a great deal of uncertainty on this topic.

Moreover, the Italian Society of Environmental Medicine has published an interesting position paper highlighting the fact that atmospheric particulate matter, in addition to being a carrier, acts as a substrate that permits the live virus to remain in the air for some time, namely for hours or even days. In the context of Lombardy, which is a highly industrialized area, the greater degree of contamination may also be a significant reason for the higher incidence of infection among the local population.³⁶

To complicate the situation, much of the information that is transmitted through the various social networks is quickly proved to be false, creating a situation of additional confusion and uncertainty.³⁷ Furthermore, many experts, continually solicited by the mass media, have issued contradictory messages, which have further increased confusion about the containment measures that urgently needed to be taken.

In response to the emergency, the healthcare system is currently holding up as best as it can, thanks to the generosity of the healthcare operators and the many gestures of solidarity and collective mobilization. However, due to a lack of or inadequate PPE, the rate of infections of medical and nursing staff has reached unacceptably high levels. Despite the WHO recommendations that health personnel should be equipped with PPEs such as N95 or FFP3 masks, eye protection, gowns, and gloves to protect themselves against infection, there is a great shortage of this material. The Deputy Minister of Health, Dr. Sileri, himself a surgeon, has tested positive for the disease and is currently under quarantine. The mortality of infected

health workers is also very high. More than 60 doctors have died as a result of the infection, and almost 10% of infected Italians work in the health sector. Doctors and nurses are arriving from Cuba and Russia to support their Italian colleagues, who are often working >20 hours a day.

The number of intensive-care hospital beds in Italy is one of the lowest in Europe, partly due to misguided health policy planning that has left the country unprepared to face the high number of patients in need of intensive care.

There are similarities as well as differences in the progression of COVID-19 in various European countries. The statistics on the rates of infection have shown that the lockdown measures in Italy have had a positive effect (but only after various attempts to contain the spread of contagion failed, by quarantining first parts of the north and then the whole country).

In Italy, the disease has now been stopped from spreading freely, and the same is foreseeable for Germany and France. In Spain, on the other hand, the rate of infections still continues to grow substantially. The next few days will show if this growth will be exponential and continue on a trajectory that is even worse than the Italian one.³⁸

Plastic surgeons also have to face this new type of challenge. Although not directly involved in assisting patients affected by this pathology, the situation has disrupted all normal surgical and diagnostic activities.

As plastic surgeons, we find ourselves experiencing a very stressful situation. On the one hand, we are dealing with healthy patients who require surgery to remediate an aesthetic problem and who, by not suffering any urgent medical need, will again be able to resort to cosmetic surgery at some time in the distant future. On the other hand, we are also dealing with patients who need a reconstructive surgery, which is necessary but not urgent and therefore also has to be postponed until the situation has “normalized”. However, the date when this will happen is impossible to forecast or predict. Consequently, we are faced with a situation of absolute uncertainty.

As doctors, we would like to contribute to the emergency response by supporting our hospitals. However, without specific experience in the field, there is little we can do. For those of us who run a private practice that is not associated with any hospital facility, active participation is even more unlikely.

We can, however, carry on our specialist activities through online medical practice or telemedicine³⁹ tools. WhatsApp, for example, enables us to receive images from postoperative patients or to analyze clinical examinations and thereby ensure a quick response.

On a daily basis, I receive photographs from patients who have recently undergone surgery but who are afraid to go out and come in for a checkup, and who thus remove their dressings themselves and have their partners or relatives photograph them. In this manner, we can evaluate the wounds and the healing process and reassure our patients about the progression of their procedures.

Obviously, this implies assuming greater responsibility, also from a medical-legal point of view. Nevertheless, this situation has unexpectedly led to a reestablishment

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of trust and amicable relationships between doctors and patients. We are all keenly listening to the needs of patients, and patients are listening to doctors. Patients are asking us doctors to be “present,” to be supportive, and to abide by our Hippocratic Oath.

As plastic surgeons, we can be part of a wider project to put doctor–patient relationships on a new footing and to promote a renewed alliance, not just between doctors and patients, but also between people. As such, this time of crisis represents a chance for a renewal of interpersonal relationships, an opportunity that must not be missed. It will then be up to us to figure out how to manage and maintain this new spirit in the future.

Another important issue involves upholding the financial commitments that we must normally fulfil. The lack of paid surgical activities, as well as the impossibility of generating any revenue through procedures such as fillers, Botox, or laser treatments, is a great cause for concern. The fact that we cannot predict when we will return to “normal” operations is an absolutely new and unexpected experience that no one can remedy.

As the president of an international NGO, www.emergenzasorrisi.it, that performs reconstructive surgeries in developing countries, I have had to suspend surgical missions in Benin, Afghanistan, and Iraq without knowing when we will be able to return to work in these countries. Not to mention the fact that if the containment measures adopted prove to be sufficient, these countries will soon also have to face this terrible virus.

A vaccine would certainly make for a triumphant end to the SARS-CoV-2 saga; however, it is difficult to create effective vaccines against RNA viruses such as this one.

To sum up, we are all stuck at home in line with the Italian government decree. All businesses, factories, and shopping centers are closed, and it is uncertain whether they will be able to reopen quickly. The forecast is that even after the resumption of normal activities, the ensuing economic crisis will bring Italy to a standstill for several months or even years; all of this obviously without any prospective solutions or renewed opportunities.

The European Union, which could and should act as an umbrella for all member countries, has so far proved unable to launch a joint response, so that all member states have had to pursue autonomous emergency measures without any central coordination or synergies.

In short, the pandemic that has hit the world, and Italy especially, should make us realize how suddenly our lives can change and enable us to reflect on the true values that must guide us in the future.

For many of us, reaffirming “In God We Trust” leads to a path of faith and hope. On the other hand, for many others, faith in man’s ability and resourcefulness may serve as a beacon of light at the end of the tunnel—but once again, we must reiterate the principle that together, we will find a way out of this horrible nightmare.

And thence we came forth to see again the stars
 E quindi uscimmo a riveder le stele – Dante
 Alighieri, *Inferno*, XXXIV, *verse 139*

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