

## The disappearing of emergency surgery during the COVID 19 pandemic. Fact or fiction?

### Editor

The sudden COVID-19 spread with its high mortality rate, especially in the North-West of Italy, has completely changed our professional life. In a few days, intensive care units (ICU) found themselves full of people in need of ventilatory support and new wards were created overnight, in order to cope with such a burden of patients. All the hospitals had to re-plan their entire activity<sup>1-2</sup>. Our Surgical Unit is part of one out of three tertiary referral hospitals in a capital town (Turin, Piedmont, NW of Italy) that has roughly one million of inhabitants. In our hospital, 6 new wards were created in a sole week. One of the two ICU was completely dedicated to COVID patients. All surgical activity was re-planned and only emergency and oncologic operations continued to run.

Since the beginning of the COVID emergency, we have seen a rather unexpected phenomenon. It was as if all the other pathologies, except COVID pneumonia, were disappeared. The number of operations in emergency regime were felt as considerably decreased, as well.

But, why? Just for fear? And, if it is true that old people stayed at home as long as they could, what about the younger ones? And is it true that we performed less operations in emergency regime?

To analyse the dynamic relationship between emergency surgery and COVID pandemic restrictions, we queried our administrative dataset comparing the 2 months lockdown period with the same one of last year. In our country the lockdown started on March 8th. Surgical activity was progressively resumed since the end of April. Therefore, we focused our study timespan from the 1st of March

	March–April 2019	March–April 2020
<b>Total accesses</b>	10201	4168
<b>Accesses requiring surgical consultation</b>	186	157
<b>Access severity code</b>		
White	9	0
Green	90	108
Yellow	87	49
Red	0	0
<b>Emergency operations</b>	44	38
Appendectomy	12	7
Cholecistectomy	1	2
Colon resection	11	11
Ileal resection or adhesiolysis	11	11
Hernia repair	6	6
Peptic ulcer suture	3	1

to the 1st of May 2020. We reviewed all the accesses in Emergency Department, looking for those of surgical interest (*i.e.* requiring surgical consultation) and, in this group, how many people have been operated on and hospitalized.

In two months, the Mauriziano Hospital registered 4168 accesses to the Emergency Department. Of these, 157 (4%) were of general surgical interest (85 on March and 72 on April). We performed 38 surgical interventions (17 on March and 21 on April). Emergency operations represented 24% of surgical accesses. Median age was 57 years (range 22–88) and 42% were female.

In the same period of 2019, 10201 accesses were registered. Of these, 186 (1.8%) were of surgical interest (92 on March and 94 on April). Specifically, we performed 44 operations in emergency regime (21 on March and 23 on April). Emergency operations represented 23.6% of surgical accesses. Median age was 65 years (range 17–92) and 52% were female.

The percentage of surgical accesses was significantly increased (chi square 45.4,  $p < 0.001$ ) but the absolute number was unchanged as well as the typology of operations performed

(chi square 1.71,  $p 0.79$ ). Details are reported in *Table 1*.

The most relevant data is the fall of the total number of accesses by 60%. These data reveal how the fear of COVID-19 has kept most of the people out of the Emergency Department. But, in contrast to what reported by other countries<sup>3</sup>, this is not true about pathologies of surgical interest that were unaffected by the COVID emergency. We think that these data may be of value for administrators facing the reorganization of services during pandemic outbreaks. Moreover, the rapid reduction of emergency access rate should prompt us to reconsider the use of emergency departments during normal-life time and the relationship between hospital and territorial health services in our country.

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