Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Both, a *patient circuit* in the emergency area[1] as well as an independent healthcare circuit for the circulation of suspected patients who required emergency surgery were established. This protocol establishes the steps to be followed by each professional who comes into contact with the infected patient.

Due to the particular considerations of the need for asepsis in the surgical patient, donning and doffing personal protective equipment (PPE) for surgery personnel is complex. A *video-tutorial* for the training of professionals in donning and doffing of sterile PPE has been prepared. In addition, a *check list*[2] for an assistant to guide and check that the person donning or doffing the surgical PPE performs all the necessary steps to ensure their protection.

In addition to the mentioned measures and the general protection measures, we have introduced two additional protection measures. The first consists of a *clinical screening* carried out both to patients admitted to the hospital and to their companions by three residents trained for this function. Suspected patients underwent the polymerase chain reaction (PCR) test.

As we did not have a universal screening test available for all asymptomatic patients who had to undergo emergency surgery and clinical screening may not be entirely reliable in patients with urgent surgical pathology, we incorporated a *radiological screening*[3] in these patients through a chest computed tomography (CT). A PCR test was performed in the case of those patients who were suspected through clinical and epidemiological screening and in patients with CT findings.

The COVID-19 infection rate has been analysed in healthcare professionals and patients operated on during the period from 13th March to 24th April 2020. The combination of the protective measures employed has resulted in a low rate of occupational and patient infections. Of the 183 professionals in the Department, only 2 doctors and 2 nurses were infected by SARS-CoV-2 during the analysed period (2.1%). These figures contrast with published data, in which health personnel suffer a high rate of infection[4].

The screening team identified 9 suspected cases on the hospital ward. These cases were initially isolated, and after the PCR test for COVID-19, 4 of them were positive (2 patients and 2 relatives).

According to the chest CT detection protocol, 65 preoperative CT scans were performed. Six patients (9.2%) had a test with findings compatible with SARS-CoV-2 infection that were not confirmed by the PCR test.

Emergency surgery has shown a significant decrease in the period analysed (181 surgeries with admission in 2019 and 108 in 2020). Despite the increase in morbidity and mortality in surgical patients described in other studies during the pandemic period[5], no statistically significant difference has been identified in the morbidity and mortality of our patients when comparing both periods (Table 1 Table 1).

During the pandemic, when all efforts are focused on the treatment and control of infected patients, we cannot forget that there are patients who will require our assistance without delay.

An early response by developing clear protocols for the care of emergency surgery patients in the period of the COVID-19 pandemic has been essential to achieve a low rate of contagion between professionals and patients treated.

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Persistent symptoms after acute COVID-19 infection: importance of follow-up☆

Persistencia de manifestaciones clínicas tras la infección COVID-19: importancia del seguimiento

To the Editor:

Since its beginning at the end of 2019, and given its rapid spread, the SARS-CoV-2 infection has become a health emergency in the form of a worldwide pandemic. There are numerous publications about the signs and symptoms of acute SARS-CoV-2 infection, with fever, cough, dyspnoea, musculoskeletal involvement (myalgias, arthralgias), diarrhoea, anosmia and dysgeusia being the most commonly described manifestations[1]. However, there are few data on the persistence of the symptoms in subjects who have overcome the infection. Our objective is to evaluate the persistence of symptoms in patients who have required hospital admission due to COVID-19 infection and who are undergoing follow-up in specialist consultations.

A retrospective and descriptive cohort study of 118 patients admitted to a hospital ward of the Virgen de las Nieves hospital in Granada from 13th March to 15th May 2020, all of them with confirmed SARS-CoV-2 infection by PCR and/or serology, with unconfirmed suspects being excluded. Signs and symptoms of onset presentation were described and later, in the specialist consultation, they were asked again about their persistence or disappearance and a physical examination was carried out including height and weight measurements.

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Of the patients included, 55.9% were male, with a mean age of 60.16 years (SD: 15.08). The BMI was 29.7 kg/m^2 (SD: 5.79), with 41% of patients with obesity and 37.3% with overweight, according to the BMI values (overweight, BMI > 25.0 to 29.9 kg/m^2; obesity, BMI > 30.0 kg/m^2).

Regarding cardiovascular risk factors, the most common associated pathologies were arterial hypertension (50%), hypercholesterolemia (28%) and type 2 diabetes mellitus (22%). Other associated comorbidities were: asthma (14.4%), sleep apnoea-hypopnea syndrome (8.5%), chronic obstructive pulmonary disease (6%), ischemic heart disease (6%), and chronic kidney disease (6%). The mean stay in the hospital ward was 11.25 days (SD: 8.5), with 7.6% requiring intensive care and 4.2% invasive mechanical ventilation. 3.4% required non-invasive mechanical ventilation. Regarding radiological findings, 94% had radiographic abnormalities during admission, with a prevalence of bilateral multilobe involvement in 68.6%.

The re-evaluation in the specialist consultation was carried out after a mean of 50.8 days (SD: 6.02) following hospital discharge.

The symptoms at admission and during the acute phase were highly variable, with only 5% of the total being asymptomatic. According to frequency, the signs and symptoms were: fever (84.7%), cough (65.3%), dyspnoea (61%), diarrhoea (50.8%), ageusia (50.8%), myalgia (49, 2%), anosmia (42.4%), chest pain (34.7%), headache (34%) and expectoration (13.6%).

At the follow-up visit, when asked about the symptoms present at the onset, 62.5% of patients reported persistence of symptoms: dyspnoea (31.4%), asthenia (30.5%), myalgia (13%), cough (5%), anosmia (1.7%) and ageusia (1%).

In 28%, two or more of the symptoms specified above persisted.

Our study showed that 62.5% of patients hospitalized for COVID-19 infection report persistence of some symptom after a mean period of time from discharge of 50 days, with dyspnoea and asthenia being, by far, the most common. These results agree with those published by Carfì et al.[2], where these two symptoms were confirmed as those that persisted the most.

There are limitations in our study, such as the evaluation of only hospitalized patients and the size of the sample. Furthermore, it is unknown whether some of these symptoms were present prior to SARS-CoV-2 infection in some cases.

However, the importance of clinical follow-up of these patients after the acute phase is highlighted, with the aim of monitoring the persistence, improvement, or worsening of the above-mentioned signs and symptoms.

More studies are needed to evaluate the mid- and long-term clinical course of these patients after their acute infection.

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