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Scientific letter

Impact of COVID-19 on Madrid hospital system



Impacto de COVID-19 en el sistema hospitalario de Madrid

The COVID-19 epidemic in Spain has had its highest incidence on the Madrid Autonomous Region (population 6.5 million) where the first case was diagnosed on February 25th, 2020. Since then, 64,787 COVID-19 cases have been notified in the Madrid region (almost one third of all cases in Spain) of which 41,559 have been hospitalized as of May 10th, 2020.¹

On March 8th we, a group of clinicians working in Infectious Diseases and Internal Medicine Departments of 28 public and 14 private hospitals (list of group members and hospitals appear in the appendix) in Madrid, started to collect and share daily numbers of hospitalized adult COVID-19 cases. Our group includes all the public hospitals and half of the private hospitals in Madrid.² Before the COVID-19 epidemic, these 42 hospitals had a total of 13,482 acute care (range 63–1238) and 522 intensive care unit (ICU) beds (range 0–34). Since March 30th we also collected number of hospitalizations in the IFEMA conference center that was opened as a temporary hospital on March 26th and closed on May 1st.

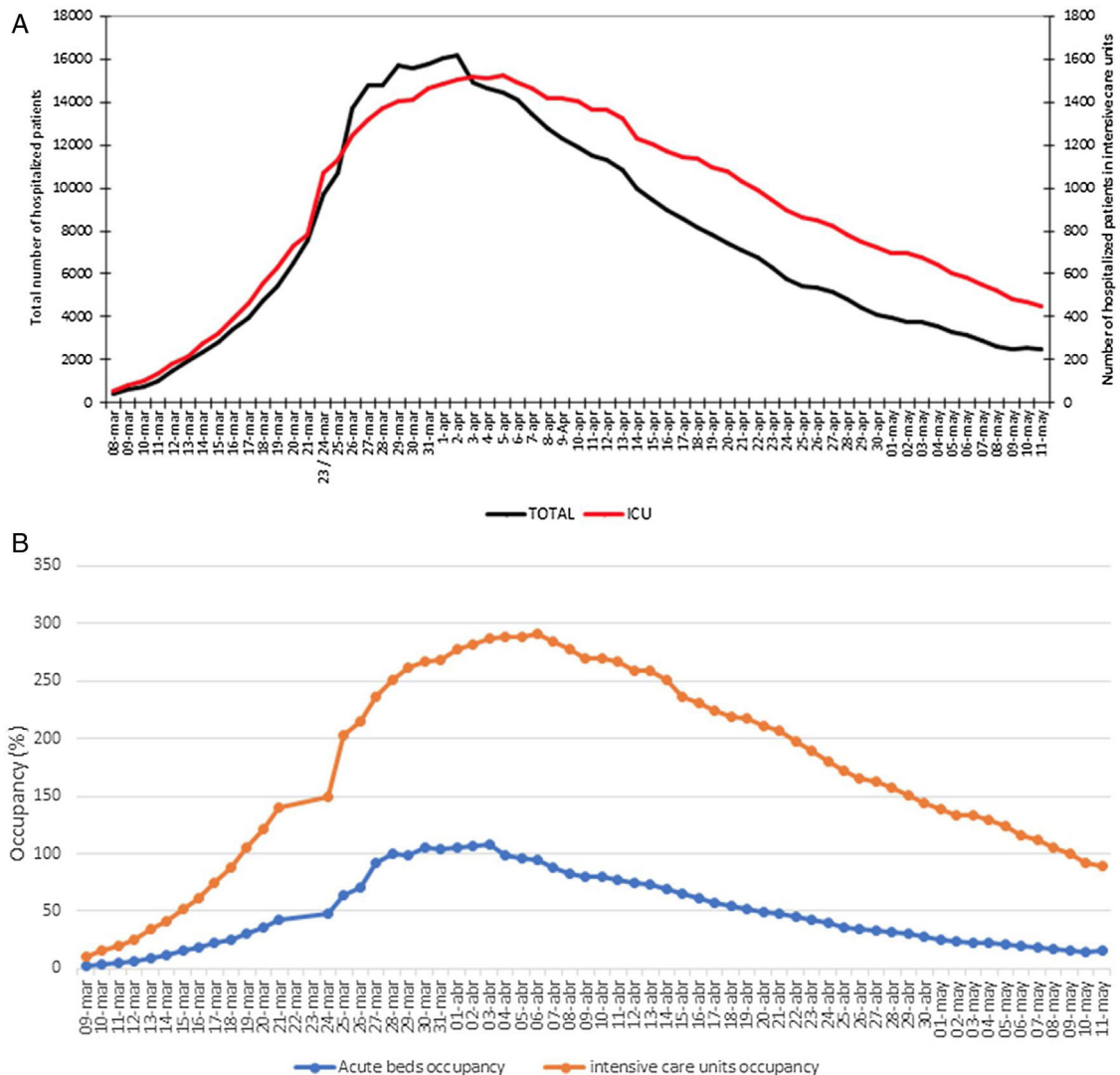


Fig. 1. COVID-19 adult patients hospitalized in the Madrid autonomous region. (a) Total number of hospitalized adult patients and number of hospitalized patients in ICU beds. (b) Daily occupancy percentage of acute care and ICU beds by COVID-19 patients.

Total number of hospitalized COVID-19 patients reached a maximum of 16,174 on April 2nd, 2020. Number of patients in ICU beds reached a maximum of 1520 on April 5th (Fig. 1a). Occupancy by COVID-19 cases (not counting IFEMA temporary hospital beds) of acute care hospitals beds reached 100% by March 28th and 105% on April 6th because additional beds were placed in improvised wards areas such as physical therapy gyms, corridors, libraries and tents outside the main hospitals. ICU beds occupancy reached almost 300% on April 6th (Fig. 1b). To deal with the enormous surge of cases needing critical care, postanesthesia care units, pediatric ICUs and cardiac/coronary care units were repurposed for COVID-19 adult patients and makeshift ICUs were placed in operating rooms and intermediate respiratory care units. From March 28th to April 7th the COVID-19 case load interrupted almost all non-COVID surgical and medical hospital activities.

Our numbers dramatically show how the COVID-19 outbreak can collapse hospital systems in developed countries. We agree with Ed Yong who recently wrote “The precise magnitude of the virus’s fatality rate is a matter of academic debate. The reality of what it can do to hospitals is not”.³ We need to learn from this devastating experiences and prepare to stop future outbreaks long before they reach the magnitude achieved by the COVID-19 epidemic in Madrid

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.eimc.2020.06.005.

Infectious sacroiliitis caused by *Bartonella henselae* in an immunocompetent adult: An unusual case[☆]



Sacroileítis infecciosa por *Bartonella henselae* en adulto inmunocompetente: un caso inusual

Cat scratch disease (CSD) is the most common manifestation in humans caused by *Bartonella henselae* (Bh).¹ In adults, there are atypical signs and symptoms with extranodal (e.g., musculoskeletal) involvement.^{2–4} The following is the first case of an adult patient with sacroiliitis secondary to Bh infection, a site of infection not previously reported in the literature. A 57-year-old woman with a history of controlled hypertension. A housewife whose neighbour trains cats, she fell with a blow to her right hip, with no clinical or radiographic evidence of fracture. She followed a favourable course with a gradual decrease in local pain. Two weeks later, she presented a productive cough with mucopurulent expectoration and a sensation of fever which was not measured, in addition to pain in the right gluteus radiating towards the knee, associated with a mild functional impediment. She had no other symptoms. On admission, she was tachycardic, normotensive and afebrile with 4l/min of oxygen via cannula for 91% saturation. Physical examination revealed diffuse *rhonchi* in both lung fields, tenderness in the right and left upper quadrant and pain on deep palpation of the right gluteus. Laboratory values: haemoglobin 15.8 g/dl, platelets 130,000 μ l, leukocytes 10,510 μ l (predominantly neutrophils), CRP 303 mg/l (normal value: <5), total bilirubin 5.89 mg/dl, direct bilirubin 1.94 mg/dl, GOT 84 U/l,

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¹ The members of the COVID19 MADRID-S.P.P.M. group is as supplementary material in Appendix A.

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GPT 82 U/l, GGT 133 U/l and AP 195 U/l. A chest X-ray showed right basal condensation. An abdominal ultrasound revealed a narrow bile duct and splenomegaly.

She was hospitalised with a diagnosis of right basal pneumonia and started on empirical treatment with ceftriaxone 2 g/day and clarithromycin 500 mg/every 12 h. After completing 10 days of antibiotic therapy, the patient followed a favourable course with respect to the respiratory tract, and her liver test results normalised. Her elevated liver tests results were interpreted to have reflected a context of sepsis. However, she showed persistent intermittent fever and elevated inflammatory parameters, with increasing pain and functional impediment of her right hip. The study was extended with HIV ELISA, blood cultures, urine culture, sputum culture with Kinyoun stain, smear microscopy and Koch culture. All were negative. Computed tomography of the abdomen and pelvis showed findings consistent with right sacroiliitis with focal bone resorption and splenomegaly, with no lumbosacral or iliac lymphadenopathy. Bone scintigraphy did not show other foci of hyperenhancement. In the absence of clinical indications of a non-infectious inflammatory aetiology, the patient was started on empirical treatment with piperacillin/tazobactam and vancomycin. She was evaluated for trauma, and joint aspiration and surgery were ruled out. After 24 days of treatment, the patient followed a course with less gluteal pain; she was afebrile, her CRP level had normalised and her ESR was 48 mm/h. It was decided to discharge her, with instructions to continue empirical antibiotic treatment at home with Co-Trimoxazole Forte, covering micro-organisms that typically infect the bone, and with close monitoring by an outpatient internal medicine team. Two weeks later, positive anti-Bh IgG was recovered with titres above 1:1,024. The patient’s treatment was adjusted to doxycycline 100 mg/every 12 h. She completed treatment in 4 months, with an asymptomatic course.

It has been reported that up to 10% of patients with CSD have an atypical presentation such as neuroretinitis, encephalitis, ery-